

Historic, archived document

Do not assume content reflects current scientific knowledge, policies, or practices.

YOUR FARM REPORTER AT WASHINGTON

Monday, February 3, 1930.

NOT FOR PUBLICATION

Speaking Time: 9 minutes

All regions

Livestock Interview 21: THE CHANGING TYPES OF SHEEP.

OPENING ANNOUNCEMENT: At this time Your Farm Reporter is going to talk about the changing types of sheep. He is going way back and tell about the old models, and wind up by presenting the 1930 models of sheep as they appear today. This is one of the regular Farm Reporter Programs coming to you every week day, except Saturday and Sunday, through the cooperation of Uncle Sam's Department of Agriculture and Station_____, All right, Mr. Reporter, let's go.

Well folks, I want to talk to you about the new model sheep that produces wool for 'mi-lady's' coat. Sheep models don't change quite so fast as automobile models, but every progressive industry has that changing fever,----and every now and then a new-model sheep appears on the green pastures of this country.

Perhaps many of you listeners are beginning to wonder what new models in sheep have to do with your business. They mean as much to the sheep raiser as the new-model automobile, means to the dealer,----greater net profits on the volume of sales. It is true, the sheep raiser can always sell the wool, lamb and mutton produced on his farm but with a new-model sheep he may be able to make a greater profit from the better quality of wool, lamb or mutton from the same-sized flock.

This country does not consume as much mutton per person as many other countries, but remember this is a young country and our food preferences may change as we grow older. Why don't some of you ambitious record hunters put on a mutton-eating contest and hang up an enviable record for yourself as well as increase the per capita consumption of mutton.

We've been producing sheep in this country ever since the Pilgrims landed on that big rock in Massachusetts.. Most of these sheep like some of our automobile manufacturers, have been keeping their secrets to themselves. Mr. Sheep is a close observer, and he's been changing his type, bringing out streamline bodies, adding a longer cowl, and otherwise making himself more attractive, as well as producing a lamb roast that would blend better with mint jelly. The changing types of sheep have given us a better quality both in wool and mutton.

I thought you radio listeners might like to mix wool, mutton, and lamb patties with the rest of your radio program, so I went over and had a talk with Mr. D. A. Spencer, in charge of sheep investigations for the United States Bureau of Animal Industry. He was at one time a Michigan sheep raiser, and has been handling sheep investigations for Uncle Sam for more than a dozen years. Being a swift talker it didn't take him long to give me a picture of changes in the

sheep industry in this country. He launched out in this manner.

"The sheep of this country have changed to meet changing conditions. People wore clothes when the country was first settled just the same, or I might say even more so, than they do today. Where did the early settlers get clothes? They made them, and many of them were made from the wool. There were no big woolen mills back in pioneer days, so the wool was made into cloth by the old hand loom. A long-fibred wool was desired for use in such a loom. Long wool however, is naturally coarse wool, but the sheep back in pioneer days produced wool which satisfied the needs for clothing and they also served for mutton purposes. Lincolns, Cotswolds, and Leicesters were brought over from England and used extensively in the olden days. That was the first model.

"Now, I'll give you the second model. Soon after the Revolutionary War, our people got tariff protection against foreign woolen goods, and this stimulated the sheep industry. Woolen mills with several looms to the mill were started and things went merrily on until the mills began to demand wool of a finer texture. They didn't want the coarse, heavy wool that was spun on the old-fashioned spinning wheels and woven in the old-time looms. No, sir, those mills wanted a strong, fine wool so they could turn out a beautiful cloth that would compete with anything that might be imported. What happened? Mr. Sheep, with the aid of his masters, got busy and changed his model to meet the demand.

"Now it happened that three Spanish Merino sheep were smuggled into Massachusetts in 1793, but their value was not known at the time so they were all three killed for mutton. Later, when their value became known, this same man who killed and ate the first Merinos paid \$1,000 for a Spanish Merino ram. The Spanish Merino and the French Rambouillet both produce the long, fine wool which was desired by the early woolen mills. These two breeds became very popular in this country, and are still in wide use in many sections.

"The latest model of anything is always interesting, so I'll give you the 1930 model sheep. As the country developed, and the sheep industry grew, it became necessary to get some profit from the sheep aside from the wool. The old pioneer sheep produced both wool and mutton. The Merinos and Rambouillets produced some mutton but the earlier types of these breeds were kept primarily for wool production. What happened? Well, Mr. Sheep, and the sheepmen of the country got busy and put out another model, or type as the sheepmen express it.

"The 1930 model, or type of sheep, produces a wool of medium length and fineness and in addition turns out a splendid quality of mutton. This combination satisfied the farmer and sheep raiser because it gives a cash return from both wool and mutton. However many producers in many sections still specialize either in wool production or in mutton production. The woolen mills, in many instances, have adjusted their machinery to use the wool that is medium in length and fineness and the industry seems to be going along very well. Here are some of the popular breeds which produce this medium wool, and at the same time, a good quality of mutton. I'll give the breed and what percentage that breed bears to all the rest of the purebred sheep in the country.

Shropshire constitute 31 per cent of our purebred sheep,
Rambouillets constitute 27 per cent,
Merinos, 15 per cent,
Hampshires 13 per cent,
Oxfords, 4 per cent,
Lincolns, 3 per cent.

1. The first step is to identify the problem or question that needs to be answered.

"In 1920 only four per cent of all the purebred sheep in this country were of the long, coarse-wool type. Forty-two per cent were kept for fine wool production, and fifty-four per cent for medium wool production and mutton."

At this point I asked Mr. Spencer to tell me how the sheep population of the country had shifted since the time when Captain John Smith sailed up the James River. Here's his reply:

"In 1840 Vermont had more sheep per acre of land, and New York a greater number of sheep than any other States. In 1860 Ohio captured both places. In 1880 Ohio had more sheep per acre, but California had the largest total number of any State. In 1900 Ohio had the acre unit still, but Montana captured the total number prize. In 1920, Ohio still had the acre lead, but Texas walked away with the numbers prize as easily as an airplane passes a man on horseback. Texas produces more than 7 per cent of all the sheep in the country."

This ended my interview with Mr. Spencer. Summarizing his statements it would seem that we have had 3 distinct types of sheep in this country. The first type before the Revolutionary War, produced long, coarse wool for home looms. The second type following after the Revolutionary war produced long, fine wool for the new woolen mills. The third type, which we have to-day, produces a fine, medium-length wool of good quality, and at the same time produces mutton.

The most popular breed of purebred sheep kept on the farms to-day is the Shropshire constituting 31 per cent of all our purebred sheep. The most popular sheep east of the Mississippi River is the Merino. This breed constitutes 84 per cent of all the purebred sheep in the area. Rambouillets come in for second place with about 16 per cent. Now we'll cross the 'Father of Waters', at St. Louis, and the types change. West of the Mississippi River Rambouillets constitute 82 per cent of all the purebred sheep in that big area, while Merinos hold second place with 18 per cent. Range conditions account in part for this shifting.

The person desiring more information on the breeds of sheep should write this station asking for Farmers' Bulletin 576-F, "BREEDS OF SHEEP FOR THE FARM."

It appears reasonably sure that old-man sheep will change his body lines and keep right in step with the popular demand for changing types.

CLOSING ANNOUNCEMENT: You have just listened to Your Farm Reporter talk about the changing types of sheep. He mentioned Farmers' Bulletin 576-F, "Breeds of Sheep for the Farm." Write this station for your free copy. This is one of the regular Farm Reporter programs coming to you through the cooperation of the United States Department of Agriculture and Station_____.

... of the ...
... of the ...
... of the ...

... of the ...
... of the ...
... of the ...

... of the ...
... of the ...
... of the ...
... of the ...
... of the ...
... of the ...

... of the ...
... of the ...
... of the ...
... of the ...
... of the ...
... of the ...

... of the ...
... of the ...
... of the ...
... of the ...
... of the ...
... of the ...

... of the ...
... of the ...
... of the ...

... of the ...
... of the ...
... of the ...

... of the ...
... of the ...
... of the ...
... of the ...
... of the ...
... of the ...

9
5340
YOUR FARM REPORTER AT WASHINGTON.

Tuesday, February 4, 1930.

NOT FOR PUBLICATION

CROPS AND SOILS NO. 21: KEEPING UP WITH THE JONESES.

ALL REGIONS.

Speaking Time: 10 minutes.

ANNOUNCEMENT: Your farm Reporter at Washington, who brings to Station _____'s radio audience each Tuesday timely pointers on crops and soils management harvested from visits with specialists in the United States Department of Agriculture, will now tell us how to keep up with the Joneses. We take it he means the Joneses of better farming. He's going to tell us what science has to say about the right time and the right way to get land ready for spring crops. Mr. Reporter---

---oOo---

I'll never forget--- about 15 years ago--- when Tex Austin's boy came back from college. . . .

I was living at the time in a farming community that was rapidly coming to the front. But there were still plenty of men left who didn't have much use for book farmers, as they called them. These men figured that you didn't need a college degree in order to slop hogs correctly, although they reasoned that sound training in organized cheering might help out when it came to calling the hogs. And I guess they thought that Tex Austin's boy would come back from agricultural college carrying a football under one arm--- a ukelele under the other--- smoking a half-pint pipe--- and wearing a pair of peg-top trousers, a sweater with a big red A on it, and a cap cocked over one ear. I guess they thought that Tex Austin's boy would be so busy telling how they hazed the freshmen that he wouldn't be able to do the chores around Tex's farm.

The opposite was the case. The young men had learned something that worked out in practice and it wasn't long before Tex was not only keeping up with the Joneses--- he was managing to keep about a neck ahead of them. With the aid of his scientifically trained son, Tex began to set the pace. You could spot his farm a mile off. Tex took the best out of the books and matched it with superior knowledge gained from long experience on the land. Pretty soon, some of the men who had been at the depot to laugh at Tex's boy when he got off the train were going to him for advice on when to plow and cultivate their own land. And if the young fellow did talk about colloids and critical moisture content and the sticky point, they soon found that he could explain what such high-faluting terms mean in words every farmer uses.

And in the years since then, I've noticed that the best farmers don't hesitate to use science and book and laboratory knowledge in their farm plans.

THE
FEDERAL GOVERNMENT
OF CANADA

IN THE
MATTER OF
THE
ESTABLISHMENT OF
A
FEDERAL
COURT OF APPEALS
FOR CANADA

AND
IN THE
MATTER OF
THE
ESTABLISHMENT OF
A
FEDERAL
COURT OF APPEALS
FOR CANADA

AND
IN THE
MATTER OF
THE
ESTABLISHMENT OF
A
FEDERAL
COURT OF APPEALS
FOR CANADA

AND
IN THE
MATTER OF
THE
ESTABLISHMENT OF
A
FEDERAL
COURT OF APPEALS
FOR CANADA

And now I want to give you an illustration of just how scientific knowledge of soils can help a farmer solve an everyday problem. If you have had any experience with heavy clay soils, you'll know the story already.

See this big lump of soil, almost as hard as a rock? Not long ago, when first dug up, it was a nice friable material taken from a field sown to winter wheat. The field was in excellent tilth. But look at it now! It looks like it might be a good prospect for a brickyard.

How did this soil get into this condition?

I'm going to let L. B. Olmstead, a soil scientist in the Department of Agriculture, tell you how it got into this fix and how you can get it out--- just as he told me and just as Tex Austin's boy could have told his dad.

Mr. Olmstead takes a good big gob of clay soil--- saturates it with water --- works it into a pasty mass--- and then lets it dry just as the kids do when they make mud pies. "Now," says Mr. Olmstead, "if I want to get this clay back into its field condition, I'll moisten this lump and then let it stand till it comes to a certain uniform moisture content. When the lump reaches this condition, it's easy to break it into fine crumbs and its original tilth can be restored. In fact, if the lump is thrown outdoors and subjected to wetting, drying, freezing, and thawing for a few months, it will crumble to pieces and return to something like its original tilth. In the reasons for this behavior of clay soils, you can find the secret of good tillage practices."

I asked Mr. Olmstead what makes a soil behave like this. He said that it's the effect of soil moisture on the extremely fine particles of the soil which we call COLLOIDS. The word is spelled c-o-l-l-o-i-d. These colloids, or soil particles, are so fine that an ounce of dirt may contain millions of billions of them. From one-fourth to one-half of a clay soil is colloid.

These fine particles unite to form larger groups and this makes it possible to grow crops on a soil. These groups are the soil crumbs or granules which we all know are essential to good soil tilth. Now, these granules form only when the soil is stirred at just the right moisture content for the water films to pull the small particles or groups into larger crumbs of soil. The particular moisture content at which granulation occurs is known to scientists as the CRITICAL MOISTURE CONTENT. This critical moisture content will vary with the amount of organic matter and clay (or colloids) in the soil, but it may be recognized by feeling or working the soil. It is somewhat drier than the so-called STICKY POINT at which the plow refuses to scour. If you squeeze a handful of soil at the critical moisture content, the moist lump will easily break apart---being not quite wet enough to break down the crumb structure and form a solid mass such as I showed you a minute ago.

All right, There's a little lesson in soil science. Now let's put it into practice. "Crops grow best," says Mr. Olmstead, "when the soil is

at or a little below its critical moisture content. Plows pull easiest then and larger clods are most easily broken up by the harrow. For these reasons, a farmer should work a heavy soil when the moisture content is just right. If the soil is too wet, working will break down the granules and puddle the soil. And it's a stiff job to get a puddled soil back into good tilth when it dries. Probably the best way to do it is to wait till after the next rain and then disk or harrow the land when the moisture content is just right."

Mr. Olmstead advises plowing a puddled soil--- or any other type of soil --- when the moisture content is right. But you can't get a badly puddled soil back into good physical shape with one plowing. It's a lot easier to keep a soil in the right condition than it is to restore it. In general, he says, clay soils should be harrowed soon after plowing---at least on the same day. Sometimes the soil has a slick, glazed look where it has been rubbed over the moldboard of the plow, but the remainder of the furrow slice crumbles easily. In this case, put off harrowing a few hours until the glazed surface dries a bit.

"I wouldn't recommend harrowing right after plowing in ALL cases," Mr. Olmstead told me. "In some localities, it's advisable to plow in the fall or early winter for spring planting. In this case, don't work the soil after plowing, but leave it soft and loose and open so that the weather can get at it. You'll then be able to make up a good seed-bed in the spring without much trouble.

"You know," he continued, "some of these heavy clay soils of ours have a mighty narrow working range. What I mean is, there's a narrow moisture-content range at which the soil can be worked. Some farmers add sand to such soils--- but this is practical only on small plots. Others add lime--- or plow under barnyard manure or green manure crops, even green weeds. These all help."

I asked Mr. Olmstead what part these colloids play in lighter soils. We don't all farm on heavy clay soils, after all. He said the colloid principle described applies also to light soils, but not to the same degree as to clay soils. The loams contain more sand and less colloid than the clays and so granulation isn't quite so important in the loams and puddling does less harm. The lighter the soil texture, that is, the less clay or colloid the soil has, the greater the moisture range under which a soil can be worked. Sandy soils generally haven't enough colloid in them to develop a crumb structure and, consequently, may be worked about equally well wet or dry.

"There's a good reason why farmers should know something about soil granulation in order to keep up with the Joneses in better farming," Mr. Olmstead concluded. We know that rain doesn't soak easily into a hard, compact soil. Plant roots, looking for food and drink, can't push through these hard soils easily, and the crop is apt to starve or to dry out. Knowing that soil moisture is an important factor, the Joneses always give their tilled crops frequent shallow cultivation to put the land in condition to receive and hold the next rain.

1. The first part of the paper is devoted to a general discussion of the problem of the existence of solutions of the system of equations (1) for arbitrary values of the parameters α and β . It is shown that the system has solutions for all values of the parameters α and β if and only if the condition $\alpha + \beta > 0$ is satisfied.

2. In the second part of the paper the problem of the existence of solutions of the system of equations (1) for arbitrary values of the parameters α and β is solved. It is shown that the system has solutions for all values of the parameters α and β if and only if the condition $\alpha + \beta > 0$ is satisfied.

3. In the third part of the paper the problem of the existence of solutions of the system of equations (1) for arbitrary values of the parameters α and β is solved. It is shown that the system has solutions for all values of the parameters α and β if and only if the condition $\alpha + \beta > 0$ is satisfied.

4. In the fourth part of the paper the problem of the existence of solutions of the system of equations (1) for arbitrary values of the parameters α and β is solved. It is shown that the system has solutions for all values of the parameters α and β if and only if the condition $\alpha + \beta > 0$ is satisfied.

5. In the fifth part of the paper the problem of the existence of solutions of the system of equations (1) for arbitrary values of the parameters α and β is solved. It is shown that the system has solutions for all values of the parameters α and β if and only if the condition $\alpha + \beta > 0$ is satisfied.

6. In the sixth part of the paper the problem of the existence of solutions of the system of equations (1) for arbitrary values of the parameters α and β is solved. It is shown that the system has solutions for all values of the parameters α and β if and only if the condition $\alpha + \beta > 0$ is satisfied.

R-F.R. 2/4

"Of course," he said, "I know a busy farmer can't do ALL his field work on days when the moisture content is just right. But I DO think he should keep the principle in mind and humor his tricky heavy soils when he can. The weather may sometimes do wrong, but this principle is always right."

--ooOoo--

ANNOUNCEMENT: Your Farm Reporter at Washington, will now bid you good day until tomorrow when he will bring you some timely tips gleaned from Uncle Sam's poultry experts. He will have more facts on crops and soils management for you next Tuesday.

The first part of the paper discusses the importance of maintaining accurate records of all transactions. It is essential for the company to have a clear and concise system in place to ensure that all data is properly recorded and stored. This will allow for easy access and retrieval of information when needed.

The second part of the paper focuses on the importance of regular communication and collaboration between all team members. It is crucial for everyone to stay informed and up-to-date on the latest developments and changes within the organization. This will help to ensure that everyone is working towards the same goals and objectives.

The third part of the paper discusses the importance of maintaining a high level of security and protection for all company data. It is essential to implement strong security measures to prevent unauthorized access and data breaches. This will help to protect the company's reputation and ensure that all sensitive information is kept safe.

YOUR FARM REPORTER AT WASHINGTON

Wednesday, February 5, 1930

NOT FOR PUBLICATION

Speaking Time: 10 Minutes

Poultry Interview No. 21: MODERN INCUBATION

ANNOUNCEMENT: Now we're going to have a report, for poultry raisers, on modern methods of incubation. This comes to you from the United States Department of Agriculture, through YOUR FARM REPORTER AT WASHINGTON. Have your pencils and paper handy---you may want to jot down the number of a bulletin. Now, we hear from YOUR REPORTER.

It seems that the practice of incubating eggs is just about as old as the hills. It is so old that we don't know just how far back into the dim ages it does go. But it was pretty well developed several thousand years ago, in the ancient Chinese and Egyptian Civilizations.

The Chinese and Egyptians made quite an art of it. Incubation at that time required much skill, and the training was passed down from father to son through many generations.

In those days incubators were merely rooms, or chambers, in which heat could be maintained. Men worked right in the room with the eggs. You can imagine the labor this involved, to handle the eggs and to keep the temperature just right. Everything depended on the skill of the workmen.

And then, for a long time there wasn't much progress. In fact, the development of commercial hatcheries, such as the Chinese and Egyptians had, is a development of very recent years in this country. Our modern mammoth incubators and immense hatcheries, with their automatic heat control, automatic turning---everything automatic, almost---are products of the present generation. Such labor-saving devices are something new under the sun---very new, if we look back even a few years, to the time of small lamp incubators.

However, the hatchery business has made up for this late start in a big way, as you all know. And it appears to be still growing. Some large hatcheries today hatch and sell more than a million chicks every year. And Mr. A. R. Lee, Department of Agriculture poultry husbandman, estimates that, all together, hatcheries turned out around 800 million chicks during 1929.

As Mr. Lee pointed out, we've already passed the point where less than half of our chickens are hatched under hens. The latest figures show that approximately 57 per cent are hatched artificially. But, with 43 per cent still hatched by hens, the figures also show that there's still plenty of room left for expansion of artificial hatching.

There's no question that modern mammoth-type machines give us many advantages we've never had before. We can regulate moisture, which was always a

THE [illegible] OF [illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

cult problem at best with the old, lamp incubators. We can test eggs for infertility and dead germs without handling them individually. Instead of handling each egg, hatcherymen now simply flash a strong electric light along under a whole tray. And we can turn eggs 4 or 5 times a day merely by adjusting an automatic device. All of which makes our modern incubators very much more efficient than hens or than the 300-to 400-egg incubators many of you used to keep.

And, since the hatching industry is really in its infancy yet, we can expect still further improvements. Electricity is being used more and more for heating and operating incubators, and this may bring about some changes -- especially with the increasing extension of electric current to farms. The long hot-water type of incubator, popular several years ago, is still good, but it is now being built in several tiers. Incidentally, Mr. Lee tells me that in the last few years the cabinet and room types of machine seem to be gaining in popularity.

But besides perfecting the machinery of incubation the industry is also learning new things about how to operate it. As you know, it is the custom now to turn eggs from the second through the seventeenth day. But recent experiments indicate that it may not be advisable to turn them after the fifteenth day.

Other recent studies made by hatcherymen tend to show that the most profit comes from chicks hatched in March, April and early May.

Right now, according to Mr. Lee, the Department of Agriculture is investigating the spread of certain diseases during incubation. They hope that this will lead to discovery of effective methods of disinfecting incubators to control losses resulting from disease.

Then, there's still another way in which the hatchery business is keeping up with the times. It is the increasing emphasis placed on quality. At first the goal of commercial hatcheries seemed to be quantity production, but along with other modern industries they're realizing the value in the slogan "Quality First."

As a result we find constant improvements in sanitation and in disinfection of incubators. And perhaps the biggest step forward has come from careful supervision of breeding flocks which produce the eggs for hatching. Most big hatcheries today select their breeding stock with great care, and many of them give blood tests for disease. Use of pedigreed male birds which came from flocks bred for high egg production, is an important factor in raising the production of flocks.

If you've been interested in poultry for very long, you know that there have been a good many changes in farm poultry raising in the last few years. And the development of large-scale hatching has been largely responsible for some of them.

Take early hatching, for instance, this is one of the important steps in growing good pullets. It's possible now to get all the early hatched chicks you want.

Then we have the improvement in the quality of farm flocks. Mr. Lee tells me that in the Middle West and South this improvement is especially

2-5-30

noticeable. Farm flocks used to be largely made up of mongrel stock. Now large numbers of them are purebred. And this has naturally led to an increase in egg production, as well.

The Department of Agriculture has no publication on operating a hatchery but has Farmers' Bulletin 1538-F on Incubation and Brooding of Chickens-, which tells about the operation of incubators. I want to call your attention again, though, to that new bulletin I mentioned last week -- "Business Records for Poultry Keepers." The number is Farmers' Bulletin 1614-F. Let me know if you want a copy.

ANNOUNCEMENT: That was YOUR FARM REPORTER, folks, reporting on modern incubation. The number of that bulletin on "Business Records for Poultry Keepers," is Farmers' Bulletin No. 1614-F. If you want it write to YOUR FARM REPORTER at Station _____ or at the United States Department of Agriculture in Washington, D. C.

9
u340
YOUR FARM REPORTER AT WASHINGTON

Thursday, February 6, 1930

NOT FOR PUBLICATION

Speaking Time: 10 Minutes.

Cooperation Interview No. 21: SHIPPING LIVE POULTRY IN CAR-LOTS

ANNOUNCEMENT: Now we have our weekly radio interview with a specialist of the Federal Farm Board. YOUR FARM REPORTER AT WASHINGTON has interviewed Mr. Gordon W. Sprague of the Farm Board's Division of Cooperative Marketing and he's ready to report. Now, Mr. Reporter, tell us about shipping live poultry in car lots.

Mr. Sprague tells me that pooling live poultry in carload lots is a common practice, during rush seasons in many sections of the country----- although it's more common in the Southern states than anywhere else.

The plan is a simple one, and works well where there's only a small volume of poultry to be handled. It's also a good method for cooperative organizations which haven't enough capital to finance their own shipping, since pooling doesn't require any capital.

But at this point Mr. Sprague makes a suggestion. He believes in looking ahead. By all means, he tells producers, deduct a fraction of a cent a pound from the proceeds and establish a reserve fund. Thus you can accumulate capital, and then when the proper time comes you can set up your own cooperative organization on a going basis.

The way it works now, a group of farmers who have live poultry or turkeys to sell get together and appoint an agent or manager-- often a farmer or the county agent--- to look after the details. To the manager the farmers report the number of pounds they have to deliver, within a certain period, say a week or 10 days. In that way they arrange the carload, or several carloads. Then the agent gets in touch with the whole-sale buyers, sometimes car-lot receivers at a large market, sometimes dressing plant operators in nearby cities. In either case the man in charge of the pool gets a list of prices which these prospective buyers will pay at the car door on delivery date. Usually he approaches buyers in different parts of the country to get more bids and develop competition for poultry at his shipping point, which ordinarily means better prices. The buyer who makes the best bid gets the poultry.

In most cases the buyer sends a man to take charge of the car, and assumes all of the expense of moving it. Sometimes farmers themselves take

the responsibility, but moving a car of live poultry involves such great risk that ordinarily they don't take it.

It should be pointed out that generally there's very little to be gained by a pool moving its own car to market. So, considering the risk, it's usually better for an organization that isn't financed to let the buyer take care of the moving.

In fact, this is one of the big reasons for the popularity of the live car method. Live cars can be sold in advance of delivery and the buyer carries all the costs. No capital is needed. And the individual farmers in the pool get their money promptly.

Whoever ships the car has to take certain precautions and assume certain risks. Poultry has to be protected against weather. And of course strict measures must be taken to prevent disease. Poultry in cars are subject to several infectious diseases which cause heavy losses, the most serious being a bronchitis often called the "gaps." This disease works so rapidly that it may cause heavy losses in apparently healthy birds before the market is reached.

In connection with the risk of shipping, a lot depends on the man who goes along with the car. If he's experienced he may bring the poultry to market at an increase in weight--- Big buyers frequently count on that. If he's not, the poultry may lose weight. So if a pool does move its own poultry it's very important that the man who goes along in the car be an experienced poultry carman.

But getting back to Mr. Sprague's outline of the pooling plan, we'll say that the buyer takes the responsibility. The car is ordered to be on track at the specified date, cooperating farmers are notified to have their poultry on hand, and the buyer's representative is at the car door to receive them. This is another advantage. The buyer pays on a quality basis, by grade. And when you sell to him on that basis at the car door you get a first-hand idea of the type of poultry that the market wants, and the type that brings the best prices.

There are several selling plans, the simplest being an outright sale to the buyer. The buyer agrees to run the car to market and to pay certain prices at a certain point on a given day. When the cooperative manager has arranged for delivery the transaction is completed. The buyer may pay each farmer for his poultry as it is delivered or he may pay the pool manager the entire sum. In either case a sufficient amount is left with the manager to cover costs or to create a reserve fund.

Now, perhaps it may be impossible to make up an entire carlot at one certain point. In this case the load can be completed at other places along the line. Of course there's one trouble with this---it adds to the cost. The railroad makes a special charge for each stop or "setout."

Incidentally some of the larger cooperative organizations which ship poultry in this way maintain feeding stations along the railroad right-of-way,

where day-to-day accumulations of poultry can be held and fed. Then when live cars come along an over-full car can be relieved and a light car can be filled up. This plan is good insurance against the chance that some producers will not make the promised deliveries.

Now let's do a little summing up: What are the main points to remember about this method of cooperative selling? Well, Mr. Sprague sums it up like this:

In areas where there isn't much money available for cooperative organization, the live car shipment is a good way to start in. But it is never more than that. It shouldn't by any means be considered the end.

"If poultry producers will take advantage of it by opening a reserve fund and accumulating capital, it will prove very much worthwhile. Then they can eventually set up their own organization--perhaps own their own dressing plant. And they can open up even better markets for their eggs and poultry."

ANNOUNCEMENT: That was YOUR FARM REPORTER, discussing with you the shipping of poultry in carload lots. Each Thursday, you know, he brings you a report on some phase of cooperative marketing from the Federal Farm Board. Next week the subject will be: "Suggestions on Organizing a Cooperative Creamery."

9
2/6
YOUR FARM REPORTER AT WASHINGTON

Friday, February, 7, 1930

NOT FOR PUBLICATION

Speaking Time: 10 Minutes

Dairy Interview No. 21: SIZE IN RELATION TO PRODUCTION

ANNOUNCEMENT: Today YOUR FARM REPORTER AT WASHINGTON talks to dairymen. He has an old, old question to discuss with you: "Is size related to production? And how?" He brings you some light on the question direct from the United States Department of Agriculture in Washington. Let's hear from him.

Every once in a while you see on newspaper sports pages the old case of "A good big man being better than a good little man." But I was a little surprised the other day when I heard a farmer apply that same comment to dairy cows. What he meant was that, other conditions being equal, big cows are better producers than smaller cows of the same breed.

Of course I've heard that question argued before, but never in just those terms. So I betook myself to the Bureau of Dairy Industry to learn if there were any definite facts on it. There were---and mighty interesting facts. And, in General, they tend to bear out the conclusion that there is some relationship between size and production. Between certain limits large cows in a given breed do seem to have higher producing capacity than their smaller sisters.

Consider the figures compiled by Dr. J.C. McDowell, veteran herd management specialist of the Department of Agriculture, from reports of dairy herd improvement associations. For both Jerseys and Holsteins the figures for milk production, butterfat production and income over feed cost show a remarkable correlation with weight of cows. In every case an increase of 100 pounds in weight brought with it increases in all three of those points.

Take for instance mature cows of the Jersey breed. Cows whose records were reported--nearly 5,000 in all--were divided into groups on the basis of weight: a 600-pound group, a 700-pound group and so up to 1200 pounds. Most of the cows incidentally were in the 800, 900, and 1,000-pound groups.

But, getting down to the figures,--let's take milk production first. The average yearly production of 600-pound cows was 5,176 pounds; 700-pound cows, 5,754 pounds; 800-pound cows, 6,142 pounds; 900-pound cows, 6,422 pounds; 1,000-pound cows, 6,670 pounds; 1,100-pound cows, 6,857 pounds; and 1200-pound cows, 7,162 pounds. Note that in each case average production increased along with average weight.

2/7/30

Now take butterfat. You find the same correlation. Beginning with the 600-pound cows the butterfat production goes up like this for each 100-pound increase in weight: 266 pounds, 303 pounds, 320 pounds, 335 pounds, 346 pounds, 352 pounds, and 357 pounds.

As to income over cost of feed, it starts at \$94 for the 600-pound cows and runs consistently upward to \$136 for the 1200-pound cows.

This relationship is borne out fully by the figures compiled from Holstein records of mature cows. In fact, the Holstein figures seem even more convincing because they are based on some 18,000 records and they take in cows weighing from 800 to 1600 pounds. The annual milk production goes steadily upward from 7,434 pounds, for 800-pound cows, to 11,578 pounds for 1600-pound cows: butterfat production from 260 pounds to 392 pounds; and income over cost of feed from \$97 to \$147.

Now, of course, as Dr. McDowell points out, these figures are averages. The records include those of all cows reported by dairy herd improvement associations, classified according to weight and age. Undoubtedly in some cases smaller cows produced more than larger cows. But, all in all, the large cows of the breed seem to have the best of it. Similar results were obtained from a study of the records of Ayrshires and Guernseys.

Then at Dr. McDowell's suggestion I went to see Mr. Duncan Stuart, another Department of Agriculture dairy specialist, who has been making investigations right along this line. From Mr. Stuart I got figures obtained under what you might call "controlled" conditions--that is, with all factors taken into consideration.

All cows were fed and cared for in exactly the same way. They were weighed twice a month, their feed was weighed, and the milk was weighed after each milking. The idea was to eliminate all chances of error that might have influenced, in some cases, the other figures.

Well, Mr. Stuart's results show the same correlation; although since he had only a small number of cows, there were a few variations. In one group he had 51 two-year-old Jerseys, divided into four classes according to weight. The 700-pound cows averaged 432 pounds of butterfat during the year; the 800-pound class, 492 pounds; the 900-pound class 505 pounds; and the 1,000-pound class 518 pounds.

In the case of 2-year-old Holsteins the results were similar, up to a certain point. Thousand-pound cows averaged 449 pounds of butterfat, 1100-cows, 488 pounds; and 1200-pound cows, 501 pounds of butterfat. Then 1300-pound cows dropped to 463 pounds, and the one 1400-pound cow in the group produced only 415 pounds of butterfat. These variations can be attributed to the fact that there were only three 1300-pound cows and only one 1400-pound cow, so that the figures are not fairly representative of large 2-year-old Holsteins.

2/7/30

Coming to the group of mature Jerseys, we find the same thing holding true. One Jersey, alone in the 800-pound class, produced 635 pounds of butterfat, while 6 Jerseys in the 900-pound class averaged 490 pounds. From that point on, however, with a fairly representative group of cows in each class, production increased steadily along with increased weight.

Taking mature Holsteins we find that as the weight increased the yearly butterfat production increased from 529 pounds to 662 pounds to 714 pounds, and then dropping to 661 pounds. In this heaviest class however there were only 4 cows and it included one very poor one; the average production of the other 3 was 750 pounds.

All of which means what? We have two sets of figures---one taking a large number of cows handled in different ways in different parts of the country and indicating that larger cows within the breed on the average, are better producers and more profitable than smaller cows. The other takes a limited number of cows, all handled in exactly the same way, and indicates the same thing--up to a certain limit.

However, as Mr. Stuart pointed out, it does appear that there IS a definite relationship between size and production. And that, on the average--larger cows are capable of producing more milk and more butterfat than smaller cows of the same breed.

Now, from the standpoint of net profits, Mr. Stuart also pointed out that large cows will naturally eat more feed than small cows. So they must produce ENOUGH more to make up for that if they are to be more profitable. And, of course, as with any rule, there are exceptions. Small cows may sometimes be record-breaking producers.

In conclusion, the point, as Mr. Stuart suggested is that, on the whole, large-size cows within a breed are usually the most profitable.

ANNOUNCEMENT: With this thought YOUR FARM REPORTER leaves you until next Monday when he will be back with a report for livestock farmers. Next Friday he again talks to dairymen. Meanwhile, if you want any further information, write to him. Two bulletins that you may want are "Care and Management of Dairy Cows," Farmers' Bulletin No. 1470-F, and "Dairy Herd Improvement," Farmers' Bulletin No. 1532-F. Address YOUR FARM REPORTER at Station _____ or at the United States Department of Agriculture in Washington.

11-1

11-1

11-1

11-1

11-1

11-1

11-1

11-1

11-1

11-1

11-1

11-1

11-1

11-1

11-1

11-1

11-1

11-1

11-1

11-1

YOUR FARM REPORTER AT WASHINGTON.

Monday, February 10, 1930.

NOT FOR PUBLICATION.

Speaking Time: 9 Minutes.

All Regions.

HOW TO OVERCOME DEFECTS BY BREEDING

OPENING ANNOUNCEMENT: Station _____ presents Your Farm Reporter in one of his regular Reporter talks. He is going to talk about an interesting subject today----breeding defects out of livestock. This is one of the daily Farm Reporter talks coming to you every week day, except Saturday and Sunday, through the cooperation of the United States Department of Agriculture. Let's go, Mr. Reporter.

--00000--

Well folks, I'm going to talk to you today about correcting a defect or fault. Every open-minded man admits that he makes mistakes. It's a good thing to acknowledge mistakes and errors. It's better to correct them when possible to do so.

I'm reminded of the Chinaman who kept a cafe in the regular cafe section of a large city. He served good food at reasonable prices and soon took trade from the nearby competitors. Not wanting to be outdone one of the cafe competitors put up a large electric sign which read, "OPEN ALL NIGHT." Another cafe owner put up an electric sign over his place which read, "WE NEVER SLEEP!" The Chinaman got busy and erected a sparkler over his cafe which read, "ME WAKEE TOO."

A friend of the Chinaman explained the error to him, and in a few days he had another sign in front of his place which read, "WE SERVE THE BEST FOOD IN TOWN EVERY HOUR IN THE YEAR." The Chinaman not only admitted his error, but he corrected it with a better sign.

During certain seasons of the year we attend fair exhibits and view almost perfect specimens of livestock. Back in the fields, barns, and pastures there are millions of cattle, hogs, sheep, horses and chickens not nearly so good as those on exhibit. "Why is this true," That's the question I asked Dr. H. C. McPhee, in charge of genetics investigations for the United States Bureau of Animal Industry.

"Well," said the Doctor, "People don't exhibit livestock with serious defects or faults. They pick the best for exhibit and leave the rest at home."

I asked the genetics investigator if defects could be bred out of livestock, and he replied that many of them could. Here is the way he said it could be done.

... ..

... ..

... ..

... ..

... ..

... ..

... ..

... ..

... ..

"Let's start out by admitting that we have three common types of defects in animals. Let's not only admit these errors, but let's say that many of them can, and should be corrected. First, we have physical defects in livestock. In hogs we have a defect known as hernia. Now it has been definitely proved that this defect is inherited or handed down to the offspring. How can it be corrected. Don't breed hogs showing any symptoms of hernia or whose offspring have shown hernia. Market defective hogs, and breed from the very best and most perfect animals.

"Otocephaly, (O-to-sef'-a-ly) -- that's a big word to pronounce -- is a physical defect found in livestock and even in human beings. In this defect the lower jawbone is generally missing, and in extreme cases an animal is born with a perfect body in every way, but with no head. This defect has been proved to be inherited. How can it be bred out of animals?

By breeding animals showing no sign whatever of this defect in their offspring. Discard breeding animals showing any tendency in the offspring towards abnormal head formations."

At this point I asked Dr. McPhee about three-legged chickens, five-legged calves, and double-headed pigs.

"They are freaks," he replied, "And I would not like to classify them under physical defects because they are due to physiological irregularities and do not occur often enough to be of economic importance to the livestock industry."

Off-color in cattle is a second type of livestock defect which may be overcome by breeding. Here are Doctor McPhee's remarks about off color. "A red-and-white Holstein calf is a purebred just the same as black-and-white calf of the same breed, but the association will not register such an animal. It is, classified as an 'off color.' What causes these off colors? They are due to the outcropping of a single recessive factor that has been dormant for a time. Here's a good illustration. A red-and-white Holstein cow is bred to a black-and-white bull of the same breed, but the bull does not have the red character in his make-up. All calves will be black and white due to dominance of black and white in the bull. In other words the black and white factors in the bull are stronger than the red ones in the cow. Now we'll take a mature cow from the above mating, and breed to a mature bull of a similar cross. The offspring from this mating will average 3 black-and-white calves and one red-and-white calf in every four calves. The red-and-white calf will breed true to the red-and-white color. Of the three black-and-white calves, one will breed true to the black and white colors. The other two will carry the recessive red factor, and in the next generation will produce calves with the red markings.

"Now, if a farmer breeds black-and-white holsteins and finds that a red-and-white calf results from the mating, it means that both parents carry the recessive red factor. Remedy this defect by discarding such animals from the breeding herd. This also explains similar outcroppings in the Aberdeen Angus breed of beef cattle. These recessive factors remain dormant or asleep for certain periods and then bob up unexpectedly just where you don't want them.

"Now the third and most important of all defects in livestock is that of production. A cow is kept for producing milk or making beef. If she falls short in these respects, she is defective, provided, of course, other conditions are favorable. The object of a hen is to lay eggs and produce meat. If she is a poor producer, after having had every opportunity, then she is defective in that respect. The object of a hog is to produce pork. The 'razor-back' will never produce good pork because it is defective along that line. Now, how are these production defects to be handled?

"Well, that's the point of our story. We naturally weed out physical defects because they are visible. We weed out off colors because we can also see them. When it comes to production defects, that's different. The production test is how many eggs does the hen lay, how much milk and how many pounds of butterfat does the cow produce, and how much will a pig or a beef weigh at a certain age?

"A lot of work is being done along these lines right now. Dairymen are breeding and raising animals from high-producing cows. Poultrymen are selecting hatching eggs from hens that lay the most eggs during the year. Hog raisers are growing hogs that finish out best at about a certain age. This is the way the production defect is being solved."

I asked Dr. McPhee about using broad sows that would farrow large litters of pigs.

"That is not always to be recommended," he replied. Many factors have to be considered in such breeding work. Vigor, size of pigs, and the way they gain in weight, are all part of such a breeding project. It is more important to raise sows that will farrow 8 strong, vigorous, uniform-sized pigs which will make uniform gains than to produce sows that will farrow 14 pigs. In large litters you can look for one or two runts. In medium-sized litters the pigs are more likely to be uniform in size, strong, vigorous, and rapid fatteners."

"To sum up," Doctor McPhee said, "most people think of a defect as a physical deformity of some kind. Well, it is that all right. It's even more than that. Discard from your breeding herds animals which produce defective offspring. A defect may be merely an off-color. Such individuals have no market value as purebreds, even though they are perfectly pure and high producers. Discard such animals from your breeding herds. Last of all we have production defects. No matter how perfect an animal may be, nor how well it is marked, if it is a low producer it's defective, and ought to be discarded from breeding herds."

This ended my interview with Dr. McPhee on how to overcome breeding defects. For additional information on this subject of breeding defects out of livestock, write for Farmers' Bulletin No. 1167-F, "ESSENTIALS OF ANIMAL BREEDING." In a short time I hope to be able to tell you more about how breeding helps fill the milk bucket, the egg basket, produce the planked steak and the pork chop.

---oOo---

CLOSING ANNOUNCEMENT: You have just listened to Your Farm Reporter talk about breeding defects out of livestock. He mentioned Farmers' Bulletin No. 1167-F, "ESSENTIALS OF ANIMAL BREEDING." Write this station for your free copy of that publication. This is one of the regular Farm Reporter programs coming to you through the cooperation of the United States Department of Agriculture and Station _____.

The first part of the report deals with the general situation of the country. It is a very interesting and informative study of the country's development. The author has done a great deal of research and has gathered a wealth of material. The report is well written and is a valuable contribution to the study of the country's development.

The second part of the report deals with the economic situation of the country. It is a very interesting and informative study of the country's economic development. The author has done a great deal of research and has gathered a wealth of material. The report is well written and is a valuable contribution to the study of the country's economic development.

The third part of the report deals with the social situation of the country. It is a very interesting and informative study of the country's social development. The author has done a great deal of research and has gathered a wealth of material. The report is well written and is a valuable contribution to the study of the country's social development.

The fourth part of the report deals with the political situation of the country. It is a very interesting and informative study of the country's political development. The author has done a great deal of research and has gathered a wealth of material. The report is well written and is a valuable contribution to the study of the country's political development.

The fifth part of the report deals with the cultural situation of the country. It is a very interesting and informative study of the country's cultural development. The author has done a great deal of research and has gathered a wealth of material. The report is well written and is a valuable contribution to the study of the country's cultural development.

The sixth part of the report deals with the future of the country. It is a very interesting and informative study of the country's future development. The author has done a great deal of research and has gathered a wealth of material. The report is well written and is a valuable contribution to the study of the country's future development.

9
2340
YOUR FARM REPORTER AT WASHINGTON.

Tuesday, February 11, 1930.

NOT FOR PUBLICATION

CROPS AND SOILS NO. 22: Fight Those Weeds!

ALL REGIONS

SPEAKING TIME: 10½ minutes.

ANNOUNCEMENT: This is the day and hour when Your Farm Reporter at Washington makes his regular weekly Crops and Soils report to Station _____'s radio audience. He has just had a session with a weed-control specialist in the United States Department of Agriculture and comes to you with a warlike talk. All right, Mr. Reporter---- what's the latest news from the front?

Recently I had a weed talk with M. W. Talbot, one of Uncle Sam's weed experts, and I recalled the many long days spent in fighting weeds on our own farm. As a boy, I regarded weed fighting as real warfare, and Mr. Talbot agreed that, in this sense, farming might be called a warfare against weeds, for the fight is a continual one.

There is no magic way to exterminate weeds. A weed is a persistent enemy, and a cunning one. It never knows when it is licked, when to give up. It grows during the night. It often spreads so quietly that we hardly know it is with us, until it is firmly entrenched. It marches down in great armies spread by the winds, by streams and irrigation ditches, and by many other agencies, even by the farmer himself. Eternal vigilance is essential. Half-hearted efforts won't get rid of the weed.

"What methods will be effective?" I asked. "Well, for one thing," Mr. Talbot began, "the best farmer in each community keeps weeds in mind in planning his crops for next year, in deciding upon the proper field for each crop, in choosing new tillage implements best adapted to his needs, and especially in buying seed. One can see a lack of such planning in every community. Here one notes that a man planted more corn than he could care for properly. There a man has left weedy land too long in meadow; or here is a man who failed thoroughly to prepare his land for alfalfa, and perhaps his neighbor used clover seed that was full of weed seeds. These are examples of ways by which weeds reduce crop yields and gain a headway that may require years of hard work to overcome."

"Weeds are not always useless, however," Mr. Talbot continued. "Sometimes they are the chief means by which organic matter is restored to thin soils. Some plants are valuable in one field and useless in another. Bermuda grass and Johnson grass are examples of plants that have high forage value, although in cultivated crops these plants are troublesome weeds. Many

kinds of weeds also are useful at times to hold snow and to prevent soil erosion. Most of these benefits will be realized, however, through proper crop rotation and use of land."

"Speaking of weed-control measures," the expert continued, "each region has its outstanding weeds, and no single method of control will work in all places. Along with many other weeds, the West has puncturevine, will oat, fanweed, Russian knapweed, Canada thistle, and field bindweed. The Middle West and East have wild garlic, field bindweed, and Canada thistle. The North has quackgrass; New England, shrubby pasture weeds; and the South, nutgrass."

"Consider, for example, wild garlic, a very troublesome weed of the winter-wheat region. Wild garlic occurs in small grain, in pastures, and in lawns, and it is spreading. Millers usually pay less for garlicky wheat for it produces garlic-tainted flour. Wild garlic also causes serious loss to the dairy industry through garlic-tainted milk and milk products. Based on experience and results of preliminary experiments, the best way yet found to control this weed is to plow infested land late each fall and again in early spring, and thereafter to grow thoroughly cultivated row crops on the field for three years. As the winter growth of garlic already is in progress, no farmer who began to fight garlic by plowing last fall should forget to start the spring campaign with a second plowing. Some farmers plow infested land in the fall and then depend upon disking in the spring; but the double-plowing method is better. Spring plowing, to be effective, must be done before the hard bulbs begin to form new bulbs."

"Perennial sowthistle is especially abundant in North Dakota, Minnesota, and neighboring regions," Mr. Talbot continued, "and experience shows that many successful farmers depend chiefly upon crop rotations and good tillage, supplemented by livestock, to subdue the weed. Effective crop rotations vary with local farming conditions and with individual needs, but, in addition to wheat, they usually include: (1) Pasture crops, particularly biennial sweetclover; (2) early-maturing crops, such as winter rye, barley, early oats, or millet, which can be followed by plowing and cultivation until frost, many sowthistle roots being thus exposed to the sun; and (3) hay crops, of which alfalfa is particularly effective in localities suited to its growth. Seeding infested fields to pasture, followed by their close grazing is one of the most practicable ways to utilize sowthistle and to prevent seed ripening. Black summer fallow, sometimes called 'bare summer fallow,' also is an effective weapon if the work is thoroughly done."

"In the South and in certain localities in the Far West, farmers have trouble with Johnson grass. Instead of trying to eradicate Johnson grass by back-breaking and expensive methods, it often is more profitable, on land where the weed is abundant, to use the plant as a hay crop in rotation with intertilled crops such as corn. This has been done successfully in a few localities in the Cotton Belt. But if a farmer decides to clean the weed out of his fields, he should strive (1) to exhaust the rootstocks already in the soil, and to prevent the growth of new ones; (2) to kill new

seedlings, and (3) to prevent the ripening and scattering of seeds. One good way to control the weed is to cut it for hay before it blossoms and every time a new growth is sent up, or, better, to pasture it closely for two seasons. Then plow shallow and use extra care in preparing the ground for the next crop and in cultivating that crop."

"Poison-ivy, another well-known weed, harms man more than it harms his crops. And you might remind your friends," cautioned Mr. Talbot, "that not all cases of ivy poisoning occur in summer; one can be poisoned in winter also. In cleaning up patches of poison-ivy, many people pile uprooted plants and later burn them. While burning poison-ivy one should keep away from the poisonous smoke, for it may cause serious injury."

"One of the worst weeds in many States is field bindweed, or wild morning-glory as it is sometimes called. This weed roots deeply, spreads rapidly, and is difficult to subdue. You can kill bindweed by cultivation if the work can be done so carefully and so frequently that top growth of the plant is prevented. Work less thorough and systematic will be largely wasted. In other words, from 20 to 30, and even more, cultivations during the growing season are required, according to data from several State experiment stations. The use of cultivators equipped with knifelike blades, instead of shovels, is recommended by the majority of experimenters. And, in spite of such drastic treatment, a few bindweed plants usually survive until the second or even the third year. In certain regions, a cropping system including both intensive cultivation and crops like alfalfa or sorghum, which produce dense shade, usually is regarded as the most practicable means of controlling field bindweed. Experiments relating to improvements in control methods are in progress at several State experiment stations.

"While thinking about next year's plans for weed control," concluded Mr. Talbot, "one might well remember that usually it is cheaper to avoid having weeds than to kill them. Much weed trouble can be avoided if one will follow as closely as possible three main principles, as follows: (1) Prevent short-lived weeds from going to seed; (2) keep down top-growth of perennial weeds and thus gradually starve their underground parts, and (3) avoid bringing weed seeds to the farm. State agricultural experiment stations have done valuable work on weed control. Perhaps your experiment station recently has developed information that applies to your particular locality."

In this ten-minute talk we have discussed in a general way the control of only a few of our many troublesome weeds. More detailed information on these weeds is contained in several pamphlets, copies of which the United States Department of Agriculture will gladly send you. If you have your pencil handy, jot down the following: POISON IVY AND POISON SUMAC, Farmers' Bulletin 1166-F. JOHNSON GRASS AS A WEED, Farmers' Bulletin 1537-F. WILD GARLIC AND ITS CONTROL, Leaflet No. 43-L. A mimeographed circular on field bindweed and another on perennial sowthistle.

--ooOoo--

ANNOUNCEMENT: You have been listening to Your Farm Reporter at Washington. Station _____ broadcasts his regular Tuesday Crops and Soils reports in cooperation with the U. S. Department of Agriculture. Write this Station for copies of the free publications mentioned. They are: Poison Ivy, Farmers' Bulletin 1166-F; JOHNSON GRASS, Farmers' Bulletin 1537-F; and WILD GARLIC, Leaflet 43-L.

YOUR FARM REPORTER AT WASHINGTON

Wednesday, February 12, 1930

NOT FOR PUBLICATION

Speaking Time: 10 minutes

Poultry Interview No. 22: BUYING DAY-OLD CHICKS

ANNOUNCEMENT: YOUR FARM REPORTER AT WASHINGTON, whom Station _____ presents each week-day except Saturday at this time, now makes his regular Wednesday report to poultry raisers. You'll remember that last week YOUR REPORTER talked about modern incubation and the hatchery business. Today he goes a step further, bringing you now a report on what he's found out around the Department of Agriculture about the question of Buying Day-Old Chicks. Here he is.....

Such popularity as the hatchery business has enjoyed in the last few years must be deserved. Last week I mentioned the fact that the biggest hatcheries turn out a million chicks every year--that total production of this country's hatcheries last year was around 800 million chicks--and that more than half of all our chicks are now hatched artificially.

It seems we've become baby-chick conscious almost as suddenly as we've become radio conscious.

But last Wednesday we examined the hatchery business from the outside--as a sort of phenomenon sprung up like a mushroom at our feet. Today let's take this phenomenon apart and see what makes it run. Supervising the operation we have our friend, A. R. Lee, poultry husbandman of the United States Department of Agriculture.

As with most so-called phenomena we find when we get inside that there's really nothing phenomenal about it. In this case we find the driving force to be none other than that old standby, the law of supply and demand. Modern machines of large capacity started the wheels going by making possible an almost unlimited supply, and poultry raisers have kept them going with an ever-increasing demand for baby chicks. It isn't inconceivable now that someday all of our chicks will be hatched in huge incubators.

However, if we knew this we still would not know very much. The real power lies in the forces that make up supply and demand.

Taking supply first, Mr. Lee points out another important element in addition to modernized machinery. It is the modern methods of shipping and transportation which make it possible to ship chicks long distances.

A few days before chicks hatch, you know, they absorb the yolk of the egg, which serves as their source of nourishment for two or three days after hatching. They will get along all right without feed for from 48 to 72 hours, so they can be shipped successfully wherever their destination is less than 72 hours away.

Hatcherymen use heavy pasteboard boxes specially designed for the purpose and arranged with ventilation openings which can be adjusted to suit weather conditions. So today, baby chicks are quickly available any place in the country.

Now, turning to the demand side, what's back of it? Why do you buy baby chicks rather than hatch them yourself? Well, you all know some of the reasons why more and more poultry raisers are doing it. It relieves the necessity of maintaining a breeding flock, or of buying hatching eggs and incubating them at home. It enables beginning poultrymen to start with a small initial investment. Many backyard poultry keepers buy baby chicks because they don't have room to keep a breeding flock properly. And so forth. The point is that general farmers who really produce most of the poultry and eggs in this country, ARE changing from home hatching to buying day-old chicks.

One of the big advantages for the general farmer, Mr. Lee explains, is that he can get his chicks early in the season and can brood them all in one or two lots. He says that most farm flocks are hatched too late, especially where the owner uses natural methods of incubation and brooding. Late-hatched chicks don't grow so rapidly as early hatched chicks, they are affected more by summer weather and they don't mature early enough in the fall to produce eggs at the time when eggs are bringing highest prices.

Since figures often speak louder than words I have some figures here on the actual money advantage of early hatching. The Department of Agriculture has found that 100 average early hatched pullets will produce about 16,000 eggs in one year, at a value of \$466.67, the value being based on the average monthly farm price for 15 years. One hundred late-hatched pullets will produce about 11,000 eggs a year, at a value of \$238.33. The difference in favor of early hatching is \$228.34--for 100 pullets for one year.

Another advantage which has led many farmers to change their methods, is the opportunity for improving the flock through purchase of good quality baby chicks. I'll give you Mr. Lee's own words on this point:

"By buying day-old chicks," he says, "farmers can get purebred stock from flocks that are bred to lay, and they can often increase egg production materially at little expense. The cost of chicks as compared to the value of the pullets raised is a small item.

"However, remember that the cheapest chicks are not likely to be the most profitable. Poor-quality chicks are usually expensive at any price. So be sure to buy chicks from hatcheries that put out quality stock and that get their eggs only from carefully selected breeding flocks.

"It is also important," he continues, "that these breeding flocks be free from disease and that the hatchery practices proper sanitation. Freedom from disease and the use of sanitary methods are essential to success with all farm flocks. But they are especially important in hatching flocks and in the hatchery itself because of the possibility of spreading disease through the handling of thousands of eggs and chicks."

Nowadays, however, hatcheries are so widely distributed that you will find reliable hatcherymen in most every State. Your State college of agriculture can furnish you the names of dependable hatcheries in your own State from whom you can

1. The first part of the report
describes the general situation
of the country.

2. The second part of the report
describes the economic situation
of the country.

3. The third part of the report
describes the social situation
of the country.

4. The fourth part of the report
describes the political situation
of the country.

5. The fifth part of the report
describes the cultural situation
of the country.

6. The sixth part of the report
describes the military situation
of the country.

7. The seventh part of the report
describes the foreign relations
of the country.

8. The eighth part of the report
describes the internal security
of the country.

9. The ninth part of the report
describes the education system
of the country.

10. The tenth part of the report
describes the health system
of the country.

buy good chicks.

Now, summing up, we find that the growth of the hatchery business seems to be based on good sound poultry practice. Most small-scale poultry raisers and many large-scale poultrymen have found that it pays them to buy their chicks rather than raise them on the farm. The big point is to get the right kind of chicks.

Incidentally Farmers' Bulletin No. 1524-F, on "Farm Poultry Raising," takes up in more detail the points Mr. Lee brought out today. If you're interested write me and I'll get you a copy.

ANNOUNCEMENT: If you want that bulletin write YOUR FARM REPORTER AT Station _____ or at the United States Department of Agriculture in Washington. The title of the bulletin is "Farm Poultry Raising," and the number is Farmers' Bulletin No. 1524-F.

1. 1990年12月，在“中国—东盟”领导人非正式会议上，中国领导人正式提出“中国—东盟自由贸易区”的构想。

1. 1997年12月1日以前，在《中国图书分类法》第四版的基础上，对《中国图书分类法》进行了修订，形成了《中国图书分类法》第五版。

FEB 11 1930

U. S. Dept. of Agr.

YOUR FARM REPORTER AT WASHINGTON

Thursday, February 13, 1930

NOT FOR PUBLICATION

Speaking Time: 10 Minutes

Cooperation Interview No. 22: SUGGESTIONS FOR THE ORGANIZATION
OF A COOPERATIVE CREAMERY

ANNOUNCEMENT: At this time each Thursday Your Farm Reporter at Washington brings you his report of an interview with a specialist of the Federal Farm Board. Today he reports suggestions for the organization of a cooperative creamery, given him by Mr. Tom G. Stitts, of the Farm Board's Division of Cooperative Marketing. Here he is----

Like all things worthwhile, a cooperative creamery should not be organized in a hurry. I realized that before I had talked with Mr. Stitts for five minutes.

And I guess many farmers have already learned that lesson pretty thoroughly from past experience. Some sections of the country are strewn with the remains of cooperative enterprises that were organized on the boom plan, by promoters who saw opportunity for profit.

However, the lesson seems to be pretty well learned in all branches of the dairy industry. I didn't realize how far dairy farmers have already gone in marketing their products cooperatively until Mr. Stitts showed me the figures. It is estimated that one-third of the butter and cheese produced in the United States and two-fifths of the fluid milk used in cities are marketed cooperatively. There are around 1,500 cooperative creameries listed with the Farm Board now. The latest complete figures, compiled for 1927, show that cooperative creameries manufactured one-half billion pounds of butter that year.

Practically three-fourths of this butter, however, came from three states, Minnesota, Iowa and Wisconsin. In these intensive dairy sections cooperative creameries have been so successful that they seem to be permanently established as parts of our modern dairy industry. Here and there in other parts of the country you find other successful cooperatives, but in the newer dairy sections

2/13/30

the small creamery typical of these three states hasn't yet become so well established. However, new associations are being launched all the time, and that's the reason for my report today.

Now, what are the main points to be considered in organizing cooperative creameries? According to Mr. Stitts the three big ones are: 1, adequate volume of business; 2, adequate financing; and 3, good management.

In considering all three of these points Mr. Stitts says farm leaders can learn a lot from the experience of the older dairy communities. But he emphasizes that any plan must be adapted to local conditions existing in any given community.

For instance, there's no rule that will state definitely the volume of business necessary for economical operation under all circumstances. Creameries are succeeding in some communities with a volume that would be entirely too small in other communities. But the point is that the cooperative must have enough volume to meet its competition in price or in service, or both, and still operate profitably. The farmers' association must operate as efficiently as the business of its competitors. That's one rule that IS definite.

So in the beginning Mr. Stitts advises a survey of the territory to find out just about how much cream is produced there. In some communities cooperatives have failed because even if they had obtained all the butterfat produced for sale, their volume would not have been large enough for economical operation.

Then the next thing is to find out how much of that cream the cooperative can expect to get. One of the ways to do this is through contract or marketing agreements, in which farmers agree to deliver their cream for a certain period. Some cooperatives prefer to use other methods, but Mr. Stitts points out that the marketing agreement contract has been of great value to many organizations during their most critical periods, the first few years of operation. It assures a given volume to those who are interested in building up the creamery.

Then, with figures on total production in your territory and with a certain volume assured, the next step is to adjust your expenses accordingly. Costs depend upon certain fixed charges, such as building and equipment, interest, insurance and taxes---as well as upon items such as labor, supplies, fuel and power which vary with the volume of business.

According to Mr. Stitts the mistake has sometimes been made of investing too much money in building and equipment. The creamery may be too large or too expensive for the size of the business. Of course a certain amount of equipment is necessary to efficient operation. But in general, he advises that it might be well to postpone buying such equipment as is not actually needed at the beginning until the volume of business justified additional expense.

Now there's another big reason why organization shouldn't be done in a hurry. It is the importance of having a well-thought-out, workable plan of financing the creamery. According to Mr. Stitts the plan should include a careful estimate of the funds needed both for fixed investments and for carrying on

The first part of the report deals with the general situation of the country. It is a very interesting and informative study of the country's development. The author has done a great deal of research and has gathered a wealth of material. The report is well written and is a valuable contribution to the study of the country's development.

The second part of the report deals with the economic situation of the country. It is a very interesting and informative study of the country's economic development. The author has done a great deal of research and has gathered a wealth of material. The report is well written and is a valuable contribution to the study of the country's economic development.

The third part of the report deals with the social situation of the country. It is a very interesting and informative study of the country's social development. The author has done a great deal of research and has gathered a wealth of material. The report is well written and is a valuable contribution to the study of the country's social development.

The fourth part of the report deals with the political situation of the country. It is a very interesting and informative study of the country's political development. The author has done a great deal of research and has gathered a wealth of material. The report is well written and is a valuable contribution to the study of the country's political development.

The fifth part of the report deals with the cultural situation of the country. It is a very interesting and informative study of the country's cultural development. The author has done a great deal of research and has gathered a wealth of material. The report is well written and is a valuable contribution to the study of the country's cultural development.

The sixth part of the report deals with the future of the country. It is a very interesting and informative study of the country's future. The author has done a great deal of research and has gathered a wealth of material. The report is well written and is a valuable contribution to the study of the country's future.

The seventh part of the report deals with the conclusion of the study. It is a very interesting and informative study of the country's development. The author has done a great deal of research and has gathered a wealth of material. The report is well written and is a valuable contribution to the study of the country's development.

The eighth part of the report deals with the bibliography of the study. It is a very interesting and informative study of the country's development. The author has done a great deal of research and has gathered a wealth of material. The report is well written and is a valuable contribution to the study of the country's development.

the business of the organization. And then it must include some reliable way of raising this capital. Many methods have been used successfully, so the main problem is picking the one you think will work best under your conditions. Selling common stock, or common and preferred stock is one way, with common stock limited to producers and preferred stock sold to both members and non-members. Another common system is the non-stock, non-profit type, where the association usually obtains its first capital through membership fees or notes given by the producers.

In either case it's well to remember that a member usually takes greater interest in an association when he has money invested in it. So it's ordinarily better to have the common stock, or notes, widely scattered among the members than to have only a few of the more enthusiastic members own most of the securities.

"A sound financial policy," Mr. Stitts said, "not only gives the association a standing with business men and other outsiders, but it also strengthens the association with its own members."

"It is a serious mistake," he declared, "to try to launch a cooperative creamery without sufficient funds. If producers aren't willing to back the association with money or credit as well as with cream, then you may usually conclude that the time to organize has not yet arrived."

But remember that a cooperative creamery can have plenty of volume and be carefully financed and still not succeed. After these essentials are attended to, success still depends on good management. So the selection of a plant manager is one of the most important responsibilities given to the board of directors.

Large cooperatives usually employ both a plant operator, or buttermaker, and a business manager. But in smaller ones all the duties of management are usually entrusted to one man. He has the direct responsibility, although it is important that the officers and directors always keep the business under their general supervision.

The cooperative creamery needs the same good management, the same experienced salesmanship, the same skill in creamery operation as a private concern---and then some. The manager of a cooperative must also be able to command the support of farmers in his community, he must understand the membership problems of his organization and he must be able to create confidence in the cooperative business. So if he is to succeed he must be a sound business man and a community leader as well as a good buttermaker.

In concluding Mr. Stitts strongly recommended that the cooperative creamery association be incorporated. The cost of incorporating is almost negligible and incorporated associations have important advantages that unincorporated organizations do not have.

1. 1. 1. 1.

1. 1. 1. 1.

1. 1. 1. 1.

1. 1. 1. 1.

1. 1. 1. 1.

1. 1. 1. 1.

1. 1. 1. 1.

1. 1. 1. 1.

1. 1. 1. 1.

1. 1. 1. 1.

1. 1. 1. 1.

1. 1. 1. 1.

1. 1. 1. 1.

1. 1. 1. 1.

1. 1. 1. 1.

1. 1. 1. 1.

1. 1. 1. 1.

1. 1. 1. 1.

1. 1. 1. 1.

1. 1. 1. 1.

1. 1. 1. 1.

1. 1. 1. 1.

1. 1. 1. 1.

1. 1. 1. 1.

1. 1. 1. 1.

1. 1. 1. 1.

1. 1. 1. 1.

1. 1. 1. 1.

1. 1. 1. 1.

1. 1. 1. 1.

1. 1. 1. 1.

1. 1. 1. 1.

1. 1. 1. 1.

1. 1. 1. 1.

1. 1. 1. 1.

1. 1. 1. 1.

1. 1. 1. 1.

1. 1. 1. 1.

1. 1. 1. 1.

1. 1. 1. 1.

1. 1. 1. 1.

1. 1. 1. 1.

1. 1. 1. 1.

1. 1. 1. 1.

1. 1. 1. 1.

1. 1. 1. 1.

1. 1. 1. 1.

1. 1. 1. 1.

1. 1. 1. 1.

1. 1. 1. 1.

1. 1. 1. 1.

This is another place, incidentally, where haste is apt to be costly. The articles of incorporation must be drawn in accordance with the law under which the association is to be incorporated. And they should be carefully drawn so that they will permit the association to do all of the things that its members want to accomplish through it.

If you want to organize a cooperative creamery in your community consult first with your State College, the United States Department of Agriculture, or the Federal Farm Board. Their advice may steer you away from some of the snags that cooperatives have struck in the past.

ANNOUNCEMENT: Your Farm Reporter has just reported to you his interview with Mr. Tom G. Stitts, dairy economist with the Cooperative Marketing Division of the Federal Farm Board. Next Thursday at this same hour Station _____ will again present another report from the Farm Board, brought to you through the courtesy of the Farm Board and the United States Department of Agriculture.

YOUR FARM REPORTER AT WASHINGTON

Friday, February 14, 1930.

NOT FOR PUBLICATION

Speaking Time: 10 Minutes

Dairy Interview No. 22: EFFECT OF WATERING AND EXTRA MILKING ON MILK FLOW

ANNOUNCEMENT: YOUR FARM REPORTER AT WASHINGTON now makes his weekly report to dairy farmers. We've asked him to report today on several questions.... Will it pay to milk cows oftener than twice a day? Does it pay to keep water available at all times during cold weather? Do cows produce more when they are milked regularly by the same person? Well, Mr. Reporter, how about it?

I remember that at one time milking only twice a day was sometimes twice too often to suit me. I guess I was more interested then in how the Rover boys discovered the South pole-- and how Ned Nelson rose from office boy to president--than in such an everyday matter as net profits. I remember that my brother and I held the theory that cows gave just so much milk anyway, so why not get it all at once in the mornings.

It's safe to say that most farm boys today know better than that. I guess they still read about the Rover boys as we used to, but they don't carry Rover boy theories over into the farm business. Tey it to 4-H clubs, to science, to natural progress, to the high cost of living, to anything you please, everybody seems to recognize that the dairy business now is a business of cold hard figures and cold hard facts. Its Rover boy days, if you can call them that, are over.

So, to get answers to those questions Your Announcer mentioned, I set out to get the coldest and hardest facts and figures I could find. And now I'll report them to you as they were given to me by Mr. T. E. Woodward, in charge of feeding and management investigations at the Department of Agriculture's dairy experiment farm at Beltsville, Maryland, just outside of Washington. Mr. Woodward's job is hunting facts, and he's been at it in the Department of Agriculture for 19 years.

Taking up the question of extra milkings, he explained that dairymen have known for years that cows will produce more if they are milked 3 or 4 times a day instead of twice. So several years ago he started an experiment to find out just HOW MUCH more they will produce, and whether they will produce enough more to make the extra milking profitable.

He took 4 Holstein cows that first year, all of them good producers. He had them milked twice and three times a day alternately, in 40-day periods. Every 40 days the number of milkings was changed, and 10 days were allowed each time to accustom cows to the change, so that the test

R-F.R.

periods were really for 30 days.

Since then the experiment has continued, with more cows and with different periods of milking. And here are the facts and figures that have come out of it up to date:

The cows that were milked two and three times a day in alternate periods of 40 days, as in the first year's experiment, gave 11 per cent more milk and 10 per cent more fat on the 3-times-a-day milking.

When they were milked in longer alternate periods of from 217 to 365 days, the difference was even greater. Three-times-a-day milking increased milk production 21 per cent and butterfat production 22 per cent.

Now the question is: Does it pay? And a real short answer would be "Maybe yes, maybe no." According to Mr. Woodward, each individual dairyman has to work that out for himself. It depends on several things: the producing ability of your cows, the cost of the extra grain that it takes to make the extra milk, the cost of doing the extra milking, and the market prices of your products.

For instance, take Holstein cows giving 30 pounds of milk a day on twice-a-day milking. By milking them three times a day you may expect an increase of around 21 per cent, which would be 6.3 pounds.

Now we'll assume the cost of labor for the extra milking, at the rate of 6 cows an hour, is 5 cents. The quantity of extra grain needed is about four-tenths of a pound for each extra pound of milk, or about $2\frac{1}{2}$ pounds altogether. So figuring grain at two cents a pound we add another 5 cents to the cost, making the total cost of the extra 6.3 pounds of milk 10 cents.

Then, our net profit depends on the market value of the milk. With the price at \$2.40 a hundred pounds, our 6.3 pounds will bring 15 cents, leaving an extra profit of 5 cents per cow per day.

So by doing a little figuring every dairyman can determine for himself whether he can make more money by milking three times a day. Mr. Woodward summed it up like this:

"In general," he said, "it appears that good producing cows can profitably be milked three times a day, provided you're selling market milk or sweet cream and getting fairly good prices. On the other hand, if your milk goes into cream for buttermaking, it's doubtful that an extra milking pays. And I'd say that in any case it wouldn't pay to milk low-producing cows more than twice a day."

Then I brought up the question of watering, and Mr. Woodward told me about another experiment. The Department of Agriculture wanted to find out the relative effects on production of allowing cows free access to water during the winter and of letting them out to drink twice a day.

R-F.R.

The results he told me, are in favor of having water available at all times. Where cows are good producers, and where farms are equipped with a water system installation of some device by which cows can get water at will, usually proves profitable. In the case of low producers Mr. Woodward doubts that returns from increased production will justify the installation of watering bowls. Although, he points out that the dairyman might also consider the time saved by not having to turn his cows out to water.

Now as to the much-disputed matter of whether a dairy cow produces better when one person milks her all the time. The Department found through experiments that it doesn't make much difference. Changing of milkers brought a small decrease in production but it was so small as to be almost negligible. And Mr. Woodward pointed out that this is borne out in the experience of big dairies where milkers take the cows as they come to them.

However, experiments have shown the value of regular milking hours, as well as regular feeding hours. Cows milked and fed on regular schedule gave 4.9 per cent more milk and 5.6 per cent more fat than they did when milked at irregular intervals.

Now my time's up. I just want to take a moment to mention the latest bulletin of the Department of Agriculture on "Dairy Herd Improvement. The number is Farmers' Bulletin 1532-F. Let me know if you want a copy.

ANNOUNCEMENT: YOUR FARM REPORTER has just concluded another week of interviews, which Station_____ brings to you each week-day except Saturday from the United States Department of Agriculture in Washington. If you dairy-men want a copy of that bulletin---No. 1532-F--write to Your Farm Reporter at Station_____ or at the Department of Agriculture.

9
In 340
YOUR FARM REPORTER AT WASHINGTON.

Monday, February 17, 1930.

NOT FOR PUBLICATION

Speaking Time: 10 Minutes

All Regions.

ARE YOUR FARM SCALES CORRECT?

OPENING ANNOUNCEMENT: At this time Your Farm Reporter is going to ask the question, "Do farmers get honest weights and measures?" Follow this radio talk for the next 8 minutes and see how this question is answered by Uncle Sam's scale expert. This is one of the regular Reporter talks coming to you every week day, except Saturday and Sunday, through the cooperation of the United States Department of Agriculture and Station _____. All right Mr. Reporter, balance your scales, and tell us how the pendulum hangs.

---ooOoo---

One rainy morning just before Christmas I was standing on the porch of a country store back in the central part of the United States. That was in my boyhood days. A powerful chime whistle had just sounded a long, two shorts and a long. That indicated that the big St. Louis Steamer was stopping at our landing. Almost before the echoes of that musical whistle had died away through the trees and hills, a farmer's wagon, loaded with turkeys, rattled around the bend in the road. Now it happened that the owner of this particular country store bought chickens, eggs, turkeys, geese, ducks and other country produce. This wagon load of turkeys was heading for the river steamer which would get them to St. Louis in time for the Christmas holidays. The merchant, anxious to get the turkeys, yelled to the driver,

"Hello, there Uncle Billie, where you going with those turkeys?"

"To the boat, -- shipping to St. Louis," was Uncle Billie's reply.

"How much you getting?" questioned the merchant.

"Fifteen cents," replied Uncle Billie, as he kept driving.

"Give you 16 cents," yelled the merchant.

"No,-----selling in St.Louis," was Uncle Billie's answer.

"Give you 16 and a half," was the merchant's banter.

"Nothing doing-----I've already promised these turkeys to my regular buyer at the market price," came Uncle Billie's terse reply as his wagon kept moving.

"Give you 17 cents, and dare you to take it," yelled the merchant as Uncle Billie's wagon rolled on towards the river where the negro roustabouts were joyfully tying up the big steamer.

Disgusted, the merchant turned and went back into the store, mumbling something as he went.

Why didn't Uncle Billie sell the merchant those turkeys? He could have gotten 2 cents per pound more than he would get in St. Louis.

Here's the answer. People in that section were afraid of the scales used by this particular merchant. It was general talk that his scales were not balanced, inaccurate, and some even went so far as to say they had been 'doctored.' It was reported that his big platform scales where he weighed grain, cotton, and livestock, were so balanced that the merchant could somehow cause them to give any weight he desired. The court finally took charge of this situation, and the merchant's scales, as well as all other public scales in that county, were tested and corrected. In this investigation it was brought out that scales can be very accurate, or they can be very inaccurate, depending on the manner in which they are installed, and the care and treatment they receive after installation.

The experience I have just related made such an impression on me that I have been interested in hearing about scale discrepancies ever since that rainy, winter morning. Thinking many of you radio listeners might be interested in this subject of correct weighing, I went over and had a talk with Mr. C. A. Briggs, livestock weighing supervisor for the United States Bureau of Animal Industry. Here are some of his remarks on installing, care, and treatment of farm scales.

"Scales have become our standard 'yardstick' in measuring many products today. We used to measure out by volume a bushel of wheat, potatoes or corn. Today we weigh out a bushel of these and many other products. We used to say a cow gave so many gallons of milk. Now the modern dairymen say a cow gives so many pounds of milk. A big automobile plant in Detroit wants to send 5,000 screws to the Boston branch, 10,000 to the San Francisco branch, and 3,000 to the Jacksonville branch. How is it done? By a simple weighing system, in which only 10 screws are actually counted, the desired numbers are weighed out like so much sugar. The new Chrysler building in New York City is 1,003 feet high, and made of reinforced concrete. Concrete for such purposes must be made right and in the proper proportions. How is it done? The sand, gravel, and cement - and lately even the water - are generally weighed and then mixed.

"Now what has all this got to do with a set of platform scales on a farm in Harper County, Kansas? Just this. We have slowly changed from measuring to weighing commodities because weighing seems to be more accurate. This Kansas Farmer is selling wheat, other grain, and livestock. He wants pay for every pound of grain or meat he sells, and he is entitled to it. If his own scales are accurate, and well balanced, and kept in first-class condition, that acts as a check on the public scales weighing his products. Public scales at big stockyard centers are inspected by Government men at suitable intervals, and farmers who have reason to doubt the accuracy of the scales they use, may request additional tests.

I asked Mr. Briggs if large scales weighed small amounts as accurately as small scales.

"No, they do not, as a general rule," was his reply. "A wagon scale used for weighing livestock, cotton, wagonloads of grain and etc., is not the right type of scale for weighing out 10 pounds of sugar."

"How is a farmer going to know when his scales are inaccurate?" was my next question to the scale expert.

"Watching the beam is one way," he replied. "That is the wagging tongue of the scales. If you watch it closely, and learn to understand its language, it'll tell you a lot of things. A well-balanced scale will have a beam that moves up and down slowly and requires several seconds to move from the bottom to the top of the loop. If you drive a cow on the scales and balance up the weights the beam ought to ride gracefully. If this beam, in balancing the scales, quickly jumps from the bottom to the top of the loop -- better make a check of the scales -- also if the beam comes to rest after swinging only once or twice, the conditions are not right.

"Is that the only way to test scales?" I asked Mr. Briggs.

"No," he replied. "That's not even a test but may lead to the discovery of important defects that can be remedied. A scale should be tested with adequate test weights. Here are some other important things to keep in mind. First have a solid foundation of concrete. Second, the pit should be roomy and dry. Above all, have the pit so arranged that it will not be a harboring place for rats. Somehow, rats like to be weighed. I once saw a steer walk on a scale with a capacity of 100,000 pounds. The weight of the steer was found to be 550 pounds. The weigher turned around. In a few seconds he turned back to the scales and the beam was at the top of the loop, and this time the steer weighed 560 pounds, but the beam started falling right before our eyes with the steer standing perfectly still. The steer finally weighed 510 pounds -- and all this variation was due to a rat crawling back and forth on the levers underneath the platform. Keep the rats out.

"Third, watch for 'binding' places in all parts of the scales, and especially about the platform. Keep scales free. Never allow them to bind.

"Fourth, keep the scales house solid. Don't allow it to get rickety.

"Fifth, arrange scales so the weigher can see all over the platform.

"Sixth, make frequent tests with proper weights."

This closed my interview with Mr. Briggs.

If you are interested in testing your scales, get in touch with your county agent, and ask him to write the scales expert in the United States Bureau of Animal Industry, Washington, D. C., and Mr. Briggs will try to help you.

Nearly all farm commodities are now sold by the pound. If you have a set of scales, check up on them at least once a year, several times is better - and maybe that will help you get more money from your farm crops.

--ooOoo--

CLOSING ANNOUNCEMENT: You have just heard Your Farm Reporter talk about testing Farm Scales. This talk came to you through the cooperation of the United States Department of Agriculture and Station_____. Next Monday Your Farm Reporter will talk about taking care of young animals on the farm.

YOUR FARM REPORTER AT WASHINGTON

Tuesday, February 18, 1930

NOT FOR PUBLICATION

CROPS AND SOILS NO. 23: Better Pastures.

ALL REGIONS

SPEAKING TIME: 10 Minutes.

ANNOUNCEMENT: Every farmer is interested in making the most profitable use of his land. That's one of the main points in successful farming. Your Farm Reporter at Washington --- whose talks are broadcast by Station --- in cooperation with the United States Department of Agriculture --- has been trying to find out what Uncle Sam's specialists have to say on the subject. And he brings you today information from Mr. H. N. Vinall and others who believe that pastures are well worth considering. All right, Mr. Reporter---

Before a wise man goes into business, he carefully studies the prospects of success.

Why even the street peanut peddlers in our larger cities locate their stands where the people are! They don't choose a quiet, lonely place so that they can hear the whistle of the peanut roaster better.

And I have known men planning to start a store in a certain town or a certain street to make careful surveys of how many people pass a given place at any hour of the day.

A man won't start a factory to manufacture goods which the people obviously will not buy. And he will be mighty careful before he starts to make goods that someone else is making enough of to supply the market.

Through long experience, business men learned to avoid what we might call BLIND PRODUCTION.

But, says Secretary of Agriculture Hyde, BLIND PRODUCTION IS THE BANE OF AGRICULTURE. And, says Chairman Legge of the Federal Farm Board, 5% OF OUR FARM LAND SHOULD BE IN WOODLOTS. And, say Department of Agriculture experts who have just finished the Agricultural Outlook for 1930, WE STAND IN DANGER OF A SURPLUS OF THE MAIN CASH CROPS THIS YEAR.

Secretary Hyde says that if we are to conduct a profitable agriculture, we must not only produce at lowest possible cost but must also keep our production close to prospective demand. Farmers are facing in the coming years as stern a test as ever faced our forefathers. Our forefathers, the Secretary explains, unwittingly created this test and this challenge. They put a continent under the plow in the span of a century. Modern farmers have harnessed power and science to the plow. The result of the energy of the pioneers, plus our own producing efficien-

cy, is an agricultural industry easily capable of producing stifling surpluses of crops and animals. Blind production for an UNKNOWN DEMAND is now the bane of agriculture. Competitive selling by 6 million individual farmers usually gives the buyer a great advantage. Farmers are challenged in the new decade to work together to meet this challenge and to overcome this situation.

Both the Department of Agriculture and the Federal Farm Board recommend more and better PASTURES as one way out.

And especially does H. N. Vinall, a Department of Agriculture specialist who has been studying pastures and pasture methods long enough to know what he's talking about. I have just come from a long talk with Mr. Vinall and now I want to tell you what he told me---

"No farmer," said Mr. Vinall, "wants to limit his production if that will mean leaner profits for him. But the use of more crop land for pasture may bring him increased profits and, at the same time, decrease the surplus of corn, cotton, wheat, and pork.

"Now, profit is the difference between the cost of production and the selling price of the product. Meat and milk produced on pasture cost only ONE-EIGHTH AS MUCH AS WHEN PRODUCED FROM CULTIVATED CROPS."

That sounded like a tall claim to me and I asked Mr. Vinall for the proof.

He told me that it was found in New York State that the cost of keeping a cow on pasture, including the supplementary feed supplied her, was less than 10 cents a day. The returns from the milk averaged 34 cents a day. When the cost of the labor used on the cows during the pasture period was deducted from the value of the milk produced, the net income from the pasture was \$11.37 per acre. On the other hand, THE AVERAGE YEARLY NET INCOME OF CROPPED LAND IN NEW YORK FOR THE PERIOD 1923-1927 WAS \$1.00 PER ACRE. These results were gotten from AVERAGE pastures. IMPROVED pastures would have returned much more with little addition to the cost, Mr. Vinall thinks.

Another illustration. In Florida, native steers on improved pasture brought a net return of \$7.82 per acre. One acre of good mixed grass pasture in Florida will furnish pasturage for a mature grazing animal 7 months in the year and produce gains averaging 1 pound a day. Mr. Vinall showed me the proof of this. In southern Louisiana, 25 acres of mixed pasture containing Bermuda grass, Dallis grass, lespedeza, and white clover supplied grazing for 30 steers and 5 head of horses and mules throughout the summer of 1927. During August, the steers made an average of daily gain of more than 2 pounds per head. Such results tell their own story so far as the South is concerned.

Another illustration. Records from nearly 500 Corn Belt farms engaged in the production of beef calves, showed that the breeding cows got over one-half their yearly feed from pasture at a cost of \$8.50 per animal.

One more illustration. Dr. H. B. Sprague of the New Jersey Agri-

cultural experiment station, says that farmers of New Jersey could get an additional 5 to 10 million dollars worth of feed annually from their pastures if they would take better care of them.

Every Western stockman knows the value of his irrigated alfalfa, clover, Sudan grass, or other forage, for pasture during dry spells when the range is low and for hay to feed when the range is covered with snow.

The low cost of feed from pastures is due largely to the low labor cost in producing that feed. A Pennsylvania expert has found that it costs only 70 cents an acre for the labor needed to keep up an acre of pasture, as against \$14.80 an acre for the labor required to produce hay and grain in a rotation of corn, oats, wheat, and clover.

Mr. Vinall continued. "Many farmers believe," he said, "that high-priced productive crop land can't be used profitably as pasture. Such land is not well used if occupied by the ordinary UNPRODUCTIVE pasture, but it will return a profit if the pasture is improved to a point where less than an acre is required to support a mature animal. To obtain such pastures on good crop lands, it's necessary to give the land only the same intelligent care and a small portion of the expense that is given to land now producing crops.

"Fertilizer will usually help. And, in this connection, it's instructive to note that an Ohio pasture which was treated with LIME and PHOSPHATE produced 136 pounds of beef per acre while UNTREATED land just over the fence produced only 59 pounds.

"It's just as true with pasture as with the production of crops that a man must stimulate production, on high-priced land, by wise management in order to profit by the large initial investment. This means the use of high-grade livestock to eat the grass and the application of fertilizers, where necessary, to make the grass grow. Pasture soils are naturally depleted especially of the valuable mineral elements, by continued selling of animal products. These minerals must be replaced now and then by adding fertilizers to the pasture. Otherwise, your pasture will run down.

"Farmers in Belgium, England, and Germany don't hesitate to use valuable land for pasture," Mr. Vinall went on. "Their pasture lands are valued at \$100 to \$150 an acre. But those fellows are making better pastures, and making better use of them, than the average American farmer."

Mr. Vinall explained that the use of a portion of a farmer's crop land for pasture couldn't be expected to increase the GROSS INCOME of that man's farm. But it might, by reducing labor charges, increase his profits. It has been proved over and over again, he said, that more pounds of meat and more gallons of milk per acre result from cropped land than from pastured land. But what counts in farming is not WHAT YOU PRODUCE, but HOW MUCH YOU HAVE LEFT AFTER THE BILLS ARE PAID.

Pasture has conservative and artistic value. A carpet of grass will protect the land from erosion and beautify the landscape.

"Pasturing cattle, you know," concluded Mr. Vinall, "is a lazy man's way of feeding them. But, after all, we all like to be lazy, whether

1917

1. The first part of the report deals with the general situation of the country and the progress of the war. It is a very interesting and informative account of the events of the year.

2. The second part of the report deals with the military situation. It gives a detailed account of the operations of the army and the navy, and the progress of the war.

3. The third part of the report deals with the political situation. It gives a detailed account of the activities of the government and the opposition, and the progress of the war.

4. The fourth part of the report deals with the economic situation. It gives a detailed account of the activities of the government and the opposition, and the progress of the war.

5. The fifth part of the report deals with the social situation. It gives a detailed account of the activities of the government and the opposition, and the progress of the war.

6. The sixth part of the report deals with the cultural situation. It gives a detailed account of the activities of the government and the opposition, and the progress of the war.

7. The seventh part of the report deals with the international situation. It gives a detailed account of the activities of the government and the opposition, and the progress of the war.

8. The eighth part of the report deals with the future of the country. It gives a detailed account of the activities of the government and the opposition, and the progress of the war.

9. The ninth part of the report deals with the conclusion of the war. It gives a detailed account of the activities of the government and the opposition, and the progress of the war.

10. The tenth part of the report deals with the final results of the war. It gives a detailed account of the activities of the government and the opposition, and the progress of the war.

we admit it or not. And this so-called laziness pays. I have just shown you that pasture land is often more profitable than cropped land."

I asked Mr. Vinall for recommendations on what grasses to grow, what mixtures of seed to sow for the different regions. He told me to tell you that it's best for a farmer to go to his county agent or his State experiment station for that information. Every State--sometimes every county---has its particular pasture problems. The Department of Agriculture, of course, has free bulletins on the different pasture crops, such as the clovers, alfalfa, bluegrass, Sudan grass, lespedeza, and so on. If you will write direct to the Department of Agriculture, Washington, D. C., and tell where you live and what you want to know, free bulletins will reach you in an early mail.

ANNOUNCEMENT: That concludes our visit with your Farm Reporter at Washington today. His talks are broadcast by Station_____through a cooperative arrangement with the U. S. Department of Agriculture, His next Crops and Soils report comes next Tuesday.

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000

9
m340 YOUR FARM REPORTER AT WASHINGTON

Wednesday Feb. 19, 1930

NOT FOR PUBLICATION

Speaking Time: 10 Minutes

Poultry Interview No. 23: ERADICATING TUBERCULOSIS IN POULTRY

ANNOUNCEMENT: And now here's Your Farm Reporter at Washington, ready to make his weekly report to poultry raisers. He has interviewed Dr. Elmer Lash of the United States Department of Agriculture tuberculosis eradication office, And he tells me he has the latest dope on the eradication of tuberculosis in poultry. All right, Mr. Reporter, let's hear it...

Some folks seem to think that tuberculosis falls in the same class with taxes, politics and Old Man River-- that it's one of those things that go on forever.

But that's what we might call undue pessimism. And besides it isn't based on actual fact. We can control tuberculosis, in fact we've already made a lot of progress in the fight to eradicate it.

On the other hand, let's don't get too optimistic. An over dose of optimism often does more damage than exaggerated pessimism. Take poultry for example. One of the big difficulties about fighting poultry tuberculosis is that many poultry growers ARE overly optimistic. They may have infection in their flocks without knowing it, and yet they never dream about the disease until their birds begin to die off.

It seems that the best way to fight tuberculosis is to be a little pessimistic about it. I mean, to realize that our flocks might become infected even if they aren't already, and to take all possible steps to prevent it.

I learned from Dr. Elmer Lash of the Tuberculosis Eradication Division, United States Department of Agriculture, that the best methods of preventing and combating tuberculosis are really simple everyday practices. The point is to use them before tuberculosis begins to cause severe losses.

The main points are to cull regularly and carefully; to sell off the old hens; to grow young chicks on clean ground; to move chicken houses to clean ground; and to avoid overcrowding. Don't try to raise too many birds on limited space.

And of these main points the big one is to get rid of the old hens, Dr. Lash declares. Old hens are responsible for most of the poultry tuberculosis. They not only contract it easily but they spread it around. Young chicks and pullets, on the other hand, aren't very susceptible to tuberculosis, so if hens are sold before they're 2 years old the biggest

source of infection is removed.

Of course, right along with selling the old hens comes the question of culling. It goes without saying that a diseased bird has no place in the poultry flock, and if you weed out all but the strong, healthy birds you have a flock that will put up stiff resistance to tuberculosis germs. However, says Dr. Lash, always remember that no matter how strong and healthy your poultry are they're apt to pick up the disease if they have the chance. So to the culling and disposing of old hens, we must add the practice of strict sanitation and good management.

Dr. Lash told me that some poultry raisers have the idea that culling is almost the equivalent of the tuberculosis test. Of course that's wrong. Culling is a very important preventive measure or check, but that's all it is. There's nothing sure fire about it in itself, except that it takes out the poor layers.

Incidentally I asked Dr. Lash about the tuberculin test. "It's very satisfactory," he told me, "and it works just as reliably with poultry as with cattle. However, the poultry farmer doesn't get much good from it unless he also practices strict sanitation. It tells him which of his birds are diseased and he can get rid of them. But then if he puts the rest of his chickens back on the same ground, and in the same houses, they'll also become infected.

Besides, Dr. Lash doesn't recommend using the tuberculin test on the average farm because of the expense. He DOES recommend it for valuable breeding flocks and other special flocks, where the owners want to be absolutely sure that tuberculosis doesn't get a foothold.

The usual way of finding ^{out} whether poultry are diseased is through post-mortem examination. And, any farmer who suspects some of his birds of having tuberculosis, can find out in this way, Dr. Lash says that about 95 per cent of the birds which show extensive white spots in the liver have tuberculosis, so that's a pretty sure symptom. However, it's usually well to have a veterinarian around to check up on the examination, especially when there's any chance for doubt.

"How widespread is tuberculosis in poultry, "I asked.

"Well," Dr. Lash replied, "how widespread are poultry? That's the first question. And we know that the yearly income from poultry in the United States amounts to more than one billion dollars.

"Now," he went on, "tuberculosis is more prevalent in the North Central states than in any other part of the country. I'd estimate conservatively that there is some tuberculosis in poultry flocks on at least 30 per cent of the farms in more than 500 counties of those states. For the country, as a whole it's safe to estimate that fowls affected with tuberculosis are present on more than one-half million farms. It's more than that but we'll use a half million as the nearest round number.

"Well if only two hens die each month on these farms it would mean a loss of 12 million birds every year. Using the old valuation of a dollar a bird this loss would amount to a million dollars a month or 12 million dollars a year. And this does not include losses due to decreased egg production, which would also run up to an enormous figure."

10. *Journal of the American Medical Association*, 1997; 277: 1033-1038.

2/19/30

I might tell you that many experts who've studied the situation believe the loss is considerably greater than Dr. Lash estimated. The figures he gave me were bottom figures.

U. S. Government veterinarians, who take occasion to help out in fighting poultry tuberculosis in addition to their main job of applying the tuberculin test to cattle, inspected 165,000 different flocks during 1929. They found that more than 9,000, or nearly 6 per cent, of these flocks contained some infection.

When the veterinarians find tuberculosis in a flock they suggest ways and means for the owner to clean up the infection. And here's what they usually tell him, according to Dr. Lash:

First, raise the new flock on clean ground and keep it separate from old birds.

Second, inspect the flock carefully at the close of the laying season and kill and burn the birds you know are diseased. Sell the rest of the flock for the market.

Then move the old chicken house to a new location and spade or plow up the old runs. Meanwhile be sure that these runs are fenced so that the young flock can't get to them.

The poultry raiser, you know, isn't the only one interested in eradicating poultry tuberculosis. The hog grower comes into the picture too--because hogs are susceptible to the avian or poultry form of the disease, and poultry tuberculosis is responsible for many retentions of hogs slaughtered under federal inspection. But to keep hogs from getting the disease we first have to stamp it out among our poultry.

The Department of Agriculture has a new bulletin that tells about the progress made in eradicating tuberculosis in cattle, hogs and poultry. It's entitled "Economic Benefits of Eradication of Tuberculosis in Livestock," and the number is Miscellaneous Publication No. 66. Let me know if you want a copy.

ANNOUNCEMENT: Do you want a copy of that bulletin? Write Your Farm Reporter at Station _____ or at the Department of Agriculture in Washington and he'll send you copies as long as the supply lasts. The title and number again are "Economic Benefits of Eradication of Tuberculosis in Livestock," Miscellaneous Publication No. 66.

The first part of the paper is devoted to the study of the properties of the function $f(x)$ defined by the equation

$$f(x) = \int_0^x \frac{1}{1+t^2} dt$$

It is shown that the function $f(x)$ is increasing and concave down on the interval $(-\infty, \infty)$. Moreover, the function $f(x)$ is bounded on the interval $(-\infty, \infty)$ and its range is the interval $(-\frac{\pi}{2}, \frac{\pi}{2})$.

In the second part of the paper, we study the properties of the function $g(x)$ defined by the equation

$$g(x) = \int_0^x \frac{t}{1+t^2} dt$$

It is shown that the function $g(x)$ is an odd function and is increasing on the interval $(-\infty, \infty)$. Moreover, the function $g(x)$ is bounded on the interval $(-\infty, \infty)$ and its range is the interval $(-\frac{\pi}{2}, \frac{\pi}{2})$.

In the third part of the paper, we study the properties of the function $h(x)$ defined by the equation

$$h(x) = \int_0^x \frac{t^2}{1+t^2} dt$$

1
m340
YOUR FARM REPORTER AT WASHINGTON.

Thursday, February 20, 1930.

Co-op Interview No. 23: The New Plans of Potato Producers.

Speaking Time: 6 Minutes

ANNOUNCEMENT: The Federal Farm Board has recognized that potatoes form one of the nation's most important food commodities, Mr. M. C. Gay of the Federal Farm Board's cooperative division, and secretary of that potato marketing conference last month, has outlined to your farm reporter at Washington just what the new potato plans are-----What did you find out for us, Mr. Reporter?-----

From what Mr. M. C. Gay, of the cooperative marketing division of the Federal Farm Board says, I gather that plans are being formed to bring order out of our present potato marketing chaos.

Briefly, the general plan is for potato growers throughout the country to organize into local co-ops, which will be units in big, regional co-ops. The ultimate aim is to consolidate the regional co-ops into a national cooperative marketing organization. In other words, potato growers in all parts of the country will be tied up together in selling potatoes, instead of cutting each other's throats as they are at present.

That is a man-size plan. And, of course, it is going to be up to you individual potato growers to really make the plan work.

Right now, not more than ten per cent of the commercial tonnage of potatoes in the United States is marketed cooperatively.

Worse than that, the competition between the co-ops themselves and competition between independent operators tends to disorganize the market.

Under the new plan, however, the central national sales organization will coordinate its sales program so as to cut out the competition between the different regional and individual co-ops shipping at the same time.

As Mr. Gay pointed out, this is the first time in the history of potato growing in this country that we have had a marketing program far-reaching enough to protect growers against unnecessary losses due to growers in some other section dumping potatoes and knock ng the bottom out of prices.

"Co-operation has been tried before, hasn't it?" I suggested.

"Not in a thorough-going way and on a national scale," Mr. Gay explained. "True," he said, "a rather large scale co-op movement was set on foot a few years ago. Co-ops were formed in Maine, and Minnesota, and Michigan, and Colorado under high pressure methods. They were set up hastily and without due consideration for some of the big needs of the growers. Furthermore, they met with opposition from many private dealers. Some went out of business. Others hung on, but haven't been able to do much toward stabilizing the potato producing business.

"Even so, some of those organizations have performed valuable services for their members. For example, the Maine Potato Growers Exchange saved its members considerable in shipping costs and losses. Before that co-op was formed the growers were forced to line the railroad cars used to haul potatoes. That cost them over \$100 a car. However, the Exchange found that it was up to the railroads to furnish satisfactory transportation.

"After getting that burden shifted to where it belonged, the association went a step further. At a cost to the growers of \$12 to \$15 a car, the Maine Potato Growers are now using heaters in the cars, as an added paying precaution against losses in transit. When you realize that Maine potato growers will ship over 50,000 cars of potatoes this year, you can appreciate what a tremendous saving such services sometimes make for the growers.

In services to their members, the local co-ops tied up in regional associations and acting through a central national organization, will be at a decided advantage over any plan of organization tried heretofore.

For instance, by pooling the needs of the various local co-ops and buying supplies in large quantities, the new plan of organization should be able to effect big savings.

Mr. Gay declares that there is no help for the potato farmers through our present disjointed, disorganized system of potato production and marketing. Farmers, he says, should realize that they must help themselves through the opportunity now made possible for them under the Agricultural Marketing Act. Production, he insists, can be adjusted to a paying level only through organization. Effective selling can only be done through nation-wide cooperative marketing.

A single local co-op may be small potatoes and few in a row working by itself, but tied up with the other co-ops in these regional co-ops which in turn act through a national cooperative, all farmer owned and controlled as provided in the Agricultural Marketing Act, it will become a real force in making potato production pay.

Here are six things such a national co-op can do: First, cut out competition between co-ops; Second, save growers money through large scale buying of supplies; Third, bring about efficient standardization; Fourth, adjust production to the probable demand; Fifth, stabilize prices; and Sixth, widen the market of the local and regional co-op.

But the prospect of doing these things depends on the individual member of the co-ops. The man who grows potatoes can make or break this plan by the support he gives the local co-op affiliated with the regional and national organization.

Too often there has been a tendency among some co-op members to think of their co-op as a last resort to be used only in case other marketing agencies show signs of falling down on the job. The responsibility rests with the grower. The government has gone far in offering help. It is up to the grower to take advantage of ^{the} big opportunity offered.

ANNOUNCEMENT: Your farm reporter at Washington has just reported to you the results of his interview with Mr. M. C. Gay, of the cooperative marketing division of the Federal Farm Board, on the subject of the new plans for potato producers. This interview is one of a series presented by this Station ---- each Thursday in cooperation with the Federal Farm Board and the United States Department of Agriculture.

#####

1. The first part of the report
describes the general situation
of the country.

2. The second part of the report
describes the economic situation
of the country.

3. The third part of the report
describes the social situation
of the country.

4. The fourth part of the report
describes the political situation
of the country.

5. The fifth part of the report
describes the cultural situation
of the country.

6. The sixth part of the report
describes the environmental situation
of the country.

7. The seventh part of the report
describes the international situation
of the country.

8. The eighth part of the report
describes the future of the country.

9. The ninth part of the report
describes the conclusion of the report.

10. The tenth part of the report
describes the appendix of the report.

1.9
In 340
YOUR FARM REPORTER AT WASHINGTON

Friday, February 21, 1930

NOT FOR PUBLICATION

Speaking Time: 10 minutes

Dairy Interview No. 23: DAIRY PROGRESS AND THE CONSUMER

ANNOUNCEMENT: At this time Your Farm Reporter at Washington brings you his weekly report for dairy farmers. We hear a lot about the problems of producing dairy products and about the problems of getting them to market. Today Your Reporter lifts the lid on the other end of the horn---the consumption end. He's going to tell us what our old friend, the ultimate consumer, has to do with the progress of the dairy industry. All right, Mr. Reporter.

You all know what happens when we produce a surplus of dairy products. We begin exporting to Europe, the protective tariff ceases to protect, and prices drop "kerplunk" to the world price level, several cents lower than our own level.

When this happens we usually lay it to increased production. But it may be due, and often is, to a decreased consumption. The law of supply and demand works in both directions. So a surplus of butter may mean either that dairy cows are producing more butterfat or that people are eating less butter---or it may mean both.

This much seems sure---to keep prices at a high level in this country production and consumption must be pretty evenly balanced. Which leads to the logical conclusion that our total production cannot increase profitably unless total consumption goes along at about the same rate.

However, that's old stuff to most of you. Dairy farmers have done a mighty good job of balancing supply with demand for the last ten years. And all indications are that they'll do an even better job in the future, because experience has proved that it pays. Regulating production will undoubtedly be still more important in years to come.

But I find in my travels around the Bureau of Agricultural Economics that regulating production to fit consumption isn't all of the problem. How about devoting a little more attention to the consumption end? For instance what will we do if consumption decreases, if people begin to drink less milk and eat less butter? We could adjust our production of course but it's always a lot more desirable to adjust it the other way---to meet an increasing instead of a decreasing demand.

Mr. Roy C. Potts, chief of the division of dairy and poultry products in the Bureau of Agricultural Economics, took the butter situation as an example. He told me that the consumption of butter per person in the United States has been decreasing each year for several years rather than increasing. And he believes

1. The first part of the paper is devoted to a general discussion of the problem.

2. The second part is devoted to a detailed analysis of the case of a single particle.

3. The third part is devoted to a detailed analysis of the case of a system of particles.

4. The fourth part is devoted to a detailed analysis of the case of a system of particles.

5. The fifth part is devoted to a detailed analysis of the case of a system of particles.

6. The sixth part is devoted to a detailed analysis of the case of a system of particles.

7. The seventh part is devoted to a detailed analysis of the case of a system of particles.

8. The eighth part is devoted to a detailed analysis of the case of a system of particles.

9. The ninth part is devoted to a detailed analysis of the case of a system of particles.

this is the main cause of the recent unsatisfactory condition of the butter markets. He also pointed out that the figures on oleomargarine production indicated that consumption of oleomargarine increased to just about the same extent that consumption of butter decreased.

Whether it is country people or city people, or both who are using less butter the figures don't show. But anyway the average person in the United States eats slightly more than 17 pounds a year, which is less than this same average person ate several years ago.

Of course butter and milk and cheese are staple products so we wouldn't expect consumption to decrease very much. But even a small decrease in the per capita consumption makes a lot of difference. And correspondingly, a small increase may make a lot of difference in the other direction.

Right now dairy cows in the United States produce about 120 billion pounds of milk a year. There are about 121 million people in the country so that the average is close to a thousand pounds for each man, woman and child.

According to Mr. Potts almost one-half of this is consumed in the form of milk and cream. More than a third is used for butter. The remainder goes into condensed and evaporated milk, ice cream and other products. The average person drinks 57 gallons of milk a year and, as I said before, eats slightly more than 17 pounds of butter. All together, we consume about four-fifths of our entire production in the form of milk or butter. So anything that happens to average per capita consumption of either one makes quite a difference when it's figured on the basis of billions of pounds.

Now, you ask, "What can be done about consumption, anyway?" Well, Mr. Potts has some suggestions.

"The dairy industry," he declared, "might profitably accept a lesson from other industries in this respect. We can employ the methods they have employed to increase the demand for our products."

First, he said, we can concentrate on producing the highest quality products possible. Increased demand always comes with higher quality.

The next thing is to market our products efficiently and economically.

Then, advertise. Emphasize the food value and the health value of our products. Put before the public the best and cheapest products obtainable.

Especially in cities, quality has already been a big factor in increasing consumption of milk. Milk supplies are safeguarded by health departments and usually pasteurized to insure that it is clean. Practically all butter in creameries is now made from pasteurized cream. The work of eradicating tuberculosis also insures a healthful product, especially where unpasteurized milk and raw products are used.

In conclusion Mr. Potts returned again to the necessary close relationship of production and consumption.

"One fact which no one can overlook," he said, "is the necessity of gauging production to keep it as near demand as possible. We should always have an adequate supply on hand but we should never force a large surplus on the market."

The first part of the document discusses the importance of maintaining accurate records of all transactions. It emphasizes that proper record-keeping is essential for the integrity of the financial system and for the ability to detect and prevent fraud.

In the second part, the document outlines the various methods used to collect and analyze data. It describes the process of gathering information from different sources and how this data is then used to identify trends and patterns.

The third part of the document focuses on the role of technology in modern data analysis. It discusses how advanced software tools and algorithms have revolutionized the way data is processed and interpreted, allowing for more efficient and accurate results.

In the fourth part, the document explores the challenges faced by organizations in managing large volumes of data. It highlights the need for robust security measures and effective data governance policies to ensure that information is protected and used responsibly.

The fifth part of the document discusses the importance of data quality and the steps that can be taken to improve it. It emphasizes that high-quality data is crucial for making informed decisions and that organizations should implement rigorous checks and balances to maintain data accuracy.

The sixth part of the document addresses the ethical considerations surrounding data collection and analysis. It discusses the need for transparency and accountability in data practices and the importance of respecting individual privacy rights.

In the seventh part, the document examines the future of data analysis and the potential for new technologies to further enhance our capabilities. It discusses emerging trends such as artificial intelligence and machine learning, which are expected to play a significant role in the future of data science.

The eighth part of the document provides a summary of the key points discussed throughout the document. It reiterates the importance of data in decision-making and the need for a comprehensive approach to data management that encompasses all aspects from collection to analysis and ethical considerations.

The ninth part of the document offers some practical advice for organizations looking to improve their data management practices. It suggests implementing regular audits, investing in training for staff, and staying up-to-date with the latest industry developments.

The tenth and final part of the document concludes with a call to action, urging organizations to take a proactive approach to data management. It emphasizes that by prioritizing data quality, security, and ethical practices, organizations can unlock the full potential of their data and gain a competitive advantage in the marketplace.

Overall, the document provides a comprehensive overview of the current state of data analysis and offers valuable insights into the challenges and opportunities ahead. It serves as a useful resource for anyone interested in the field of data science and its applications in various industries.

He suggests that dairy farmers keep in close touch with the information published by the Department of Agriculture and the Federal Farm Board, and particularly with the agricultural outlook reports. Especially, he says, watch the trend of consumption.

By doing these things, and by cooperating with other farmers and other agencies interested in the welfare of dairying, Mr. Fotts believes, that we can place the dairy industry in the position it should occupy by virtue of the food and health value of its products.

ANNOUNCEMENT: Your Farm Reporter at Washington has just presented his weekly report to dairy farmers. He asks me to mention that if you want copies of the 1930 Agricultural Outlook Reports of the Department of Agriculture, he'll get them for you free. He also suggests two bulletins: "Making and Using Cottage Cheese in the Home," Farmers' Bulletin No. 1451-F; and "Making Butter on the Farm," Farmers' Bulletin No. 876-F. Address Your Farm Reporter in care of Station _____ or in care of the Department of Agriculture in Washington.

YOUR FARM REPORTER AT WASHINGTON

Monday, February 24, 1930

NOT FOR PUBLICATION

Speaking Time: 10 Minutes

All Regions.

HOW TO TAKE CARE OF YOUNG ANIMALS.

OPENING ANNOUNCEMENT: At this time Station_____ presents Your Farm Reporter who is going to talk about the improved methods for taking care of young animals. This is an important subject, because, as you know, our old animals were first young animals. This is one of the regular Farm Reporter programs coming to you every week day, except Saturday and Sunday, through the cooperation of the United States Department of Agriculture. All right, Mr. Reporter.

Well folks, I want to talk to you today about saving animals. Noah saved the animals during the flood, and he got a lot of credit for it. Farmers have been saving and caring for animals ever since Noah turned them out of the Ark, but there hasn't been much said about that. However, farm animals play an important part in the life of most people, and for that reason, if for no other, we ought to know something about animals, and how to take care of them. Especially should we know how to take care of young animals, since they grow into mature animals which furnish us with food and clothing.

The United States Department of Agriculture estimates that there are about 188,000,000 head of livestock in this country. That includes about 166,000,000 food animals -- cattle, sheep, hogs -- and about 22,000,000 horses and mules. Our population is approximately 120,000,000 people. Now every year about 110,000,000^{head} of food animals are slaughtered for human consumption. Roughly, that means nearly one animal for every person.

Now, with a food animal supply of 166,000,000 and a yearly slaughter of 110,000,000 you can readily see that we are just about a year and a half ahead of the game. In other words, if we should stop producing livestock, and kept consuming as usual, it would take us less than two years to eat the last chop or steak or saddle of lamb in the national cupboard. Of course, such a situation is unlikely to come about.

However, our most serious problem in the livestock industry, as you all know, is to produce good quality animals at the lowest possible cost. We can easily produce enough---and more--- animals to supply the needs of our own beef, pork and mutton eaters, and to send surplus pork products into the world markets. This competition among ourselves and with the stockmen of the world keeps prices down to the point where a man who spends too much money in getting an animal ready for market can't

stay in business.

I want to discuss with you today one way of keeping down production costs. That is, to grow out to market weight every pig, every lamb, every calf, every chick produced on your farm. Also to raise every colt to saleable or useful size.

Of course, this is not possible as some loss of young animals is unavoidable. Accidents will happen. We haven't entirely conquered disease. But we can cease taking it for granted that heavy death rates among young animals, and that runt pigs, scrubby calves, and stunted colts, are just part of livestock production and have to be tolerated as part of the risks of the business.

Science has shown that unthrifty farm animals need not run up feed bills and break down profits. By attention to sanitary precautions and by improved feeding and management, the runts can be prevented and it is easy to raise thrifty, vigorous animals instead.

The threat against an animal's life and its future vigor is greatest at birth or shortly afterwards. Keep young animals alive and thrifty until they are a few weeks or a few months old, and you have taken a long stride toward the production of high-quality mature animals.

Most of the loss is attributed to lack of proper care at birth and during the few weeks or few months immediately following.

Purebreds generally receive better care than ordinary animals and therefore, the loss is not so great. However, a stock raiser ought to challenge the death of every animal on his farm and not be satisfied until he finds out what caused that death. After finding the cause, he will, of course, take steps to prevent any further loss from this source.

"WAYS TO SAVE YOUNG LIVESTOCK," is the title of Leaflet No. one-L, published by the United States Department of Agriculture. This leaflet divides young livestock losses into 2 big divisions:

First, losses caused from parasites and diseases. The loss from these two sources is much greater than it ought to be. Proper hygiene, sanitary isolation, and medical treatment, reduce losses from these sources.

Second, losses caused by improper feeding of young animals. This can and should be controlled by proper feeding methods, and suitable feeds.

Now let's see how to save all the pigs farrowed. Here we go:

Clean and scrub the farrowing pen to remove all worm eggs. The roundworm of swine is a parasite that has caused very heavy loss. Get rid of the worm eggs just before farrowing time and keep the pigs away from them afterwards, and you have practically solved the roundworm problem. Remember to clean up the sow before farrowing, and of course before she is placed in the clean pen. Pay special attention to the udders and give them a thorough washing to remove all worm eggs.

If possible remove the sow and pigs to a field sown in forage crops, and not pastured by swine since it was sown. Do this when the pigs

...the ... of ...
 ...the ... of ...
 ...the ... of ...

...the ... of ...
 ...the ... of ...
 ...the ... of ...

...the ... of ...
 ...the ... of ...
 ...the ... of ...

...the ... of ...
 ...the ... of ...
 ...the ... of ...

...the ... of ...
 ...the ... of ...
 ...the ... of ...

...the ... of ...
 ...the ... of ...
 ...the ... of ...

...the ... of ...
 ...the ... of ...
 ...the ... of ...

...the ... of ...
 ...the ... of ...
 ...the ... of ...

...the ... of ...
 ...the ... of ...
 ...the ... of ...

...the ... of ...
 ...the ... of ...
 ...the ... of ...

...the ... of ...
 ...the ... of ...
 ...the ... of ...

...the ... of ...
 ...the ... of ...
 ...the ... of ...

...the ... of ...
 ...the ... of ...
 ...the ... of ...

...the ... of ...
 ...the ... of ...
 ...the ... of ...

are about ten days old. Supply plenty of water, shade and shelter, and keep the pigs on the pasture for about four months. After this they are reasonably safe from severe worm infestation. Handling young pigs in this manner also helps prevent bullnose, mange, dietary deficiencies, cholera, and other ailments. Cleanliness, shelter, shade, water, food, and good careful management will go a long way toward minimizing pig losses.

Now Mr. Sheep is a quiet individual and has very little to say, but he knows that lamb losses are entirely too great. That leaflet I referred to says:

"Give young lambs the preference in regard to pasture. Place them on fairly dry hillsides---not^{on} bottom lands. Keep them away from wethers and all older sheep except their mothers,---and be sure that the mothers have been treated for worms."

Stomach worms take many promising lambs. Rotation of pastures and stock and care not to overstock aid in controlling losses from this source. The control of parasitic diseases would go a long way toward stopping losses to the lamb crop. Of course grazing animals present certain difficulties since they habitually soil the pastures with manure which contains the worm eggs and other infectious agents.

Now let's turn to the old cow and see why we lose so many promising young calves, and, also how we may stop at least a part of this loss. The problem of preventing calf loss is complicated. Calves are subject to tuberculosis and other diseases, digestive troubles, and parasites. Keep the mature cow healthy and control the parasites, and she will probably produce a calf with plenty of vitality and resistance. Sanitation, proper feeding, and careful management will cut down calf losses materially.

With only a few horses on a farm, pasture rotation, safe quarters for colts, specific measures for the control of infectious joint disease, and treatments for parasites will assist in controlling colt losses.

In the case of dogs, the problem of parasite control is a serious one. Sanitary surroundings and yards and medicinal treatment will aid in controlling dog losses.

Only young chicks are seriously affected by gapeworms, one of the most serious causes of chick mortality but turkeys of all ages may carry this parasite. Therefore, young chickens should be kept away from turkeys, and from the premises used by the turkeys.

In conclusion I would like to say that the United States Bureau of Animal Industry strongly believes that much of our tremendous loss to young livestock can be prevented. Forget the old idea that a certain percentage of young animals will die anyway. Challenge every death, and adopt the improved method of taking care of the young animals, and save more of them.

For further information on this subject of saving young animals, write the station to which you are now listening and ask for "WAYS TO SAVE YOUNG LIVESTOCK." This is the title of Leaflet No. one-L, which I have

quoted in this talk. You can get additional information by consulting your county agent, or your State college of agriculture.

Next Monday at this time, I'm going to talk about ton litters and pig-club contests.

CLOSING ANNOUNCEMENT: You have just listened to Your Farm Reporter talk about saving young animals. He mentioned Leaflet No. 1-L, "WAYS TO SAVE YOUNG LIVESTOCK." You may have a copy free by addressing your request to this station.

1870

1870

1870

1870

1870

1870

1870

1870

1870

1.9
-m240
YOUR FARM REPORTER AT WASHINGTON.

Tuesday, February 25, 1930.

Crops and Soils Interview No. 24:

Farm Wood Lot Planting.

ANNOUNCEMENT: Chairman Legge of the Federal Farm Board has advised farmers to use some of the non-paying crop lands for wood lots. So your farm reporter at Washington went to the experts of the Forest Service of the United States Department of Agriculture and asked them for suggestions about planting woods. The reporter is here and ready to report ----- Well, what did they have to say, Mr. Reporter? -----

Well, it seems that one way many farmers can help themselves get "out of the woods" financially, is to get into the woods and wood growing, actually.

In many cases, land will pay better with a wood crop than any other way, Mr. L. S. Cross, of the Forest Service tells me.

"What kind of trees would you plant?" I asked him.

"Of course," he said, "better use the trees which grow naturally in your region. And, of course, a lot will depend on the purpose you expect to use the trees for; whether for cord wood, or fence posts, or saw timber, or windbreaks.

"In the eastern United States," he went on, "black locust is often used. Black locust is a soil builder. It is very valuable in controlling erosion, and it produces fence posts in a short time as well as fuel wood. It is also commercially valuable for use for insulator pins for telegraph poles.

"In the South, loblolly, short-leaf, or slash pine are fast growing trees for which there is always a market. One or the other of those trees will grow most places in the southern pine region.

"In the middle West, a variety of species of hardwood are suitable for planting windbreaks," Mr. Cross said and then he suggested that before any of us decide on what trees to plant, we get in touch with our State forester or state extension people. They are in a better position to say just what will prove best in any particular locality.

"Well, after we decide what kind of trees to plant, where is the best place to get the trees?" I asked.

"There are two places to get trees," he replied. You can gather or buy the seed yourself and raise the trees in a little nursery of your own, and then transplant them to your wood lot from there; or you can get them at low cost through your State forester. Most States have nurseries for supplying farmers and others with planting stock. If they can't supply you with what you need, they can generally tell you the best place to go to get it. They will also tell you when to plant and how to plant.

"The planting is ordinarily done in the spring before growth is started," Mr. Gross added and cautioned me to be careful to see that the roots of any small trees I plant don't dry out. Exposure for even a short time, he insisted, is likely to injure the tree. Set them in a good deep hole at the same depth they have grown in the nursery. Pack the earth around the roots well, too, and fill the whole level with the ground.

In growing and planting coniferous trees on the farm, he suggests we might get some good pointers out of Farmers' Bulletin No. 1453-F. That is the name of it, "Growing and Planting Coniferous Trees." Farmers' Bulletin No. 1453-F. There is also one on Growing and Planting hardwood seedlings on the farm. That one is Farmers' Bulletin No. 1123-F. You can get either of those for the asking by writing to the United States Department of Agriculture at Washington, D. C. for them.

"What kind of land would you use for the wood-lot," I asked Mr. Gross.

"Ordinarily," he said, "the best general plan is to use the land that is not paying so well in other crops. On most farms, there are areas unsuited to growing other crops. Such land as rocky hill-sides, pastures which have grown up to weeds and brush, fields which have been farmed and worn out, acreage which has been damaged by erosion can be profitably planted to tree crops. On some farms, it may even pay to use some good crop soil for shelter belts and tree crop. That is especially true in the Middle West where there is not much native timber.

The farm wood lot furnishes the farmer fuel and fence posts and other wood for use around the farm and often gives him a good bit of ready cash from the sale of a few sawlogs or the like. And he can do the work in the woods harvesting his wood crop in the winter time when other farm work is slackened up.

"However," he went on, "a lot depends on how the woods are handled. "Cutting the Farm Woods "Profitwise" is a good leaflet to look over. It is Leaflet No. 30-L.

It seems from what Mr. Gross said, that a lot of us cheat ourselves in the way we use farm grown timber. Instead of cutting as a crop, we just chop it up for fuel as a substitute for the coal pile. When Mr. C. J. Telford, now of the Forest Products Laboratory was with the Illinois State Extension Service he made a survey which showed that the average net return from woodland cut for lumber, mine timber, ties, cooperage logs, or average quality veneer bolts was five times the return from woodlands cut for cordwood alone.

...the ...
...the ...
...the ...
...the ...
...the ...

...the ...
...the ...
...the ...
...the ...
...the ...

...the ...
...the ...
...the ...
...the ...
...the ...

...the ...
...the ...
...the ...
...the ...
...the ...

...the ...
...the ...
...the ...
...the ...
...the ...

...the ...
...the ...
...the ...
...the ...
...the ...

...the ...
...the ...
...the ...
...the ...
...the ...

In other words, it is always a good idea to use practical common sense in cutting trees. And to make the woodlot pay best, you have to be careful to protect it from fire. Don't let fire spread into your woods from the neighbors. See that the railroad burns a safety strip along its right of way next your woods. Be prepared to put out fires which may start, and do be careful in burning brush.

But fire is not the only thing to keep out of your woods. If you plant young trees, be careful they are not injured by the grazing of cattle and other stock. Hogs, in southern pine, especially long-leaf pine, root up the seedlings, and eat the roots. Cattle and horses trample and eat young growth. And sheep and goats are even worse.

Occasionally, the overcrowded parts of the woods need judicious thinning. By judicious thinning, Mr. Gross explained, he means cutting out the poorly formed or unhealthy trees or scrub species, and then leaving the big, healthy, paying trees to increase in value until they are of good paying size.

Commercial logging cost studies have been made in the Lake States, and in Arkansas and in the Appalachian and Coastal Plains regions. Those studies show that the smallest trees, either hardwood or softwood that will pay their way through a band sawmill are from 12 to 15 inches in diameter. Why that is, is not a knotty problem to solve. It is on account of the knots. The smaller trees have not had time to clear themselves of the branches low down on the trunk. Naturally, they produce knotty, low grade lumber.

Write to the State extension forester at your State agricultural college for information about markets for your home-grown timber. Many farmers are making their woodlands pay them real money. When the buyer comes your way, will your woods have any timber to interest him?

ANNOUNCEMENT: Your farm reporter at Washington has just reported to you on farm woodlots. This is one of a series of programs presented by this Station in cooperation with the United States Department of Agriculture. The publications mentioned can be had either by writing to Station ----- or by writing direct to the United States Department of Agriculture at Washington. "Cutting the Farm Woods 'Profitwise'" is Leaflet No. 30-L. "Growing and Planting Coniferous Trees on the Farm" is Farmers' Bulletin No. 1453-F and "Growing and Planting Hardwood Seedlings on the Farm" is Farmers' Bulletin No. 1137-B.

YOUR FARM REPORTER AT WASHINGTON

Wednesday, Feb. 26, 1930

NOT FOR PUBLICATION

Speaking Time: 10 Minutes

POULTRY INTERVIEW No. 24: MODERN METHODS OF BROODING.

ANNOUNCEMENT: And now here's Your Farm Reporter, ready to report to poultry raisers on his latest interview with Mr. A. R. Lee, United States Department of Agriculture poultry husbandman. From Mr. Lee he brings you now a report on modern methods of brooding poultry. Get your pencils ready to take down numbers of the bulletins he mentions, and we'll hear from him. All right ----

Speaking of emancipation, look what's happened to the hen.

It's getting so that all a modern hen has to do is to lay eggs and get herself primed up for Sunday dinners. I guess we can mark it down as another effect of the machine age on family life, for to the modern hen, family cares are old-fashioned. Chicks enter the world with a mammoth incubator for a mother, they grow up with a brooder stove for a nurse, and then it's possible that they'll spend their whole life on the fourth floor of some poultry apartment house.

By stretching your imagination a little you can imagine how some of the older hens might regard all this. Imagine them, clucking that machines are destroying the flock's moral fiber--cackling that machines are taking the sentiment out of life -- viewing with alarm the new-fangled 3 and 4-story skyscraper. What's the farmyard coming to anyway, when hens never see their own chickens, and chickens cuddle up to an oil stove?

And who would say that they weren't justified? But on the other hand who CAN say that hens are not actually better satisfied and that chicks don't lead cleaner, healthier lives? Our so-called emancipated hens might properly reply that this is just a case where reality and sentiment don't mix.

The history of incubation and brooding in the United States has been one of progressive change. From the earliest times we've had the hen performing both functions. But now, we find that hens have been very largely replaced by artificial equipment.

According to Mr. Lee we first had the small lamp hover and brooder, holding only a few chicks. Shortly afterward somebody introduced the long brooder house, heated with hot, water pipes. Then the colony brooder house, which are the most common now, supplanted the long houses.

However, history seems to be repeating itself now, and the long hot-water-pipe brooders are coming back. The trouble with this type of brooder was that the soil around them soon became full of disease germs and the chickens tended to develop leg weakness and other ailments. We can use the older-type brooders successfully now because we've learned how to control leg weakness and how to raise chicks in confinement and still keep them free from disease. For instance instead of the small outside dirt yards we now have concrete or wire yards which can be kept sanitary. But, of course, no one thought of that back in 1890 when the long brooders were first used.

I guess most of you are using colony brooders. Years of experience show that they produce excellent pullets when the range outside is kept in good condition. Poultry raisers tell me there's only one objection to them, and that is that they take more labor in caring for chicks than do the long hot-water-pipe houses for example.

If any of you are beginners at poultry raising, you may be interested in Mr. Lee's classification of brooders according to their capacity. Here's the way he classifies them:

Lamp brooders, accommodating 25 to 100 chicks; electric brooders, 50 to 500 chicks; stove brooders, 200 to 1000 chicks; and hot-water-pipe systems with an unlimited capacity. If you're going to install a brooding system it will pay you to investigate the equipment used by successful poultrymen, and farmers in your community, and get their ideas.

Mr. Lee tells me that electric brooders are being used more and more in places where electric current is comparatively cheap. The big point is that the current must be dependable at all times during the brooding season, because if it's off for only a few hours the chicks may become chilled.

Some farmers report that they've found one difficulty with electric brooders. They say that chicks often have a tendency to sweat. According to Mr. Lee sweating usually results from lack of sufficient ventilation under the hover. He says it doesn't pay to sacrifice ventilation just in order to cut down the cost of heating. He suggests that wire or wooden slats under the hover will also help to prevent sweating--and that a dim light in the house will keep chicks from crowding at night.

Stove brooders are commonly heated with coal, kerosene or distillate oil. Coal is used more extensively in the East, while on the Pacific coast, engine distillate oil is the most popular fuel. Kerosene is still used to some extent but many farmers are now using fuel oil instead. Fuel oil gives more heat and isn't so expensive for the amount of heat it produces. One trouble with kerosene is that it's sometimes hard to get enough heat from it in the colder parts of the country.

The long hot-water brooder house is on the plan of the mammoth incubator. It's mainly suited for raising chicks in large numbers, on big poultry farms where running a number of small brooders would take an unnecessary amount of labor. However, it's ^{also} specially suited to

raising broilers during the winter months. Practically all farmers who have hot-water-pipe houses use coal for fuel.

I might say just a word about another development of our modern times; the battery brooder. This brooder is in tiers, on the skyscraper plan, and the chicks are confined in trays designed especially for the purpose. Mr. Lee points out that this method is still in the experimental stage but that its use is rapidly increasing. It is especially adapted, he says to raising broilers, and is also used to some extent to brood chicks that will later be put on range and raised for egg production.

As you experienced poultry raisers know, there are important details that come up in operating brooders for best results; Sanitation, proper temperatures, sufficient ventilation, giving chicks exercise, and so forth. All these details are thoroughly covered in a Department of Agriculture Bulletin of which Mr. Lee is coauthor. The bulletin is entitled "Incubation and Brooding of Chickens," and the number is Farmers' Bulletin No. 1538-F.

In conclusion let me quote you Mr. Lee's own words on the importance of selecting the right kind of brooder for your own needs.

"Selecting a brooder," he declared, "is a very important matter because the successful brooding of chicks is often a difficult problem. Cheap unreliable brooders may easily ruin many broods of good chicks. A reliable make, on the other hand, will more than repay the difference in cost between it and a poor one in the first brooding season. And above all, be sure that the brooder is made of good material, and that the thermostat is well made. A poorly made thermostat, or one that gets out of order, may allow variations in temperature that will result in heavy losses."

And that's that for today. Don't forget to write for that bulletin if you want detailed information.

ANNOUNCEMENT: To get the bulletin on "Incubation and Brooding of Chicks" write to Your Farm Reporter in care of Station____ or in care of the Department of Agriculture in Washington. The number, in case you didn't get it the first time, is Farmers' Bulletin No.1538-F.

1. The purpose of this report is to provide a detailed description of the current state of the project and to identify the key challenges and opportunities for future work.

★ FEB 24 1930 ★

U. S. Department of Agriculture

YOUR FARM REPORTER AT WASHINGTON

Thursday, February 27, 1930

NOT FOR PUBLICATION

Speaking Time: 10 Minutes

(Region 3)

Cooperation Interview No. 24: COOPERATIVE MARKETING OF FRUITS AND VEGETABLES
IN THE SOUTHEAST

ANNOUNCEMENT: The South has always been famous for its fruits and vegetables. Florida citrus fruits and fresh vegetables, Georgia watermelons, southern sweet potatoes, are in demand all over the nation. So we asked YOUR FARM REPORTER to get us a picture of cooperative fruit and vegetable marketing here in the south. He went to the fruits and vegetables men of the Federal Farm Board, and now here he is with the report.

As Mr. K. B. Gardner and Mr. M. C. Gay of the cooperative marketing division of the Federal Farm Board, described it to me, the marketing of fruits and vegetables in the south makes an interesting picture. The way it is now it gives us excellent examples of how to market most profitably and excellent examples of how not to market.

Take watermelons for instance. As you know the southeastern states form the biggest source of the country's watermelon supply, particularly during the early summer. Georgia ships about 20,000 cars a year and Florida from 7 to 10 thousand cars.

Only a part of this big crop is marketed cooperatively, but in the main producing regions--northern Florida and southern Georgia--two cooperatives handle most of the melons. Mr. Gay estimated that growers market around 6,000 cars a year through these two cooperatives. And he added that the tendency has been for growers to join one or the other, so the total is steadily increasing.

Well, when Georgia and Florida growers first began to market their melons cooperatively, back in 1921, practically all of the melons went to 13 markets in six states. Now they're being shipped to more than 300 different markets in 40 states and 5 provinces of Canada.

Furthermore Mr. Gay points out that while production has practically doubled since 1921, the net price to growers is as high now as it was then.

This gives us an illustration of how effective a sound program of cooperative marketing can be. And it illustrates the benefits of standardization, and the sale of labeled products of known quality.

Now let's have a look at the citrus fruits. According to Mr. Gay from 30 to 40 per cent are marketed cooperatively. You all know how successful this cooperative effort has been, with standardization of quality products again playing a large part. Incidentally the Florida citrus fruit marketing organization has been strengthened this year through the program outlined by the Federal Farm Board. For one thing, all marketing is now being done through a single agency, the Florida Citrus Growers Exchange.

Men interested in Florida's fresh vegetable crops, which supply the nation during fall, winter and spring months, are looking forward to establishing a similar marketing system. Florida growers are now marketing some 12 to 15 thousand cars of vegetables cooperatively, but local cooperatives do practically all the marketing. They're hoping to establish a centralized regional marketing agency like the Citrus Growers' Exchange. They face a more complicated problem than the citrus growers because of the variety of their products. But Mr. K. B. Gardner, in charge of the fruits and vegetables section of the Farm Board's Division of Cooperative Marketing, believes that the undertaking has great possibilities for success if it is worked out.

Now, let's see what's happening in the marketing of peaches, another crop which the South gives to the country. Four southern states--Georgia, North and South Carolina and Tennessee---ship from 15 to 25 thousand carloads to market each year. Well, we find that only a small part of the crop is marketed cooperatively. In Tennessee and North Carolina cooperatives cut hardly any figure at all. Hundreds of growers and independent dealers are consigning and quoting in competition with each other. According to Mr. Gay that's why we find the market more or less demoralized now each year soon after the shipping season gets well under way.

He believes that one of the big needs of the peach industry is an efficient system of distribution, owned and controlled by the growers themselves. In Georgia he suggests that such an organization might be built around the Georgia Peach Growers' Exchange, which has been operating successfully for 21 years. And in South Carolina the South Carolina Peach Growers' association could form a strong nucleus.

So much for peaches. Another important crop is early potatoes, which are grown on a large scale in Florida, the Carolinas, Virginia and on the eastern shore of Maryland. Mr. Gay tells me that all the states mentioned have made considerable progress in marketing their potatoes cooperatively. However, there's still lots of room for development. The tonnage marketed outside of cooperatives is still much larger than that handled by them, and therefore the tonnage controlled by the growers themselves is not the deciding factor in the market.

However, steps are already under way to build up a more effective grower-controlled organization. The Federal Farm Board, the Department of Agriculture, and state agencies are cooperating with growers to work out the best way of bringing order out of the present confusion. So the future already begins to look brighter.

But in the sweet potato field the lack of organization is even more noticeable. In the lower south the industry is practically unorganized, Mr. Gay tells me. There are a few locals in Tennessee and a few other states but even these organizations are in the main merely assembling agencies for commission men. The only real effort at cooperative marketing we find on the eastern shore of Virginia, and to a smaller extent in the Carolinas. Virginia growers ship thousands of cars a year, and although the volume is smaller in the Carolinas Mr. Gay regards it as being very significant.

Most any way you look at it the problem of marketing fruits and vegetables present a complex picture, because each fruit and each vegetable usually presents particular problems of its own. But many groups of growers have already taken long strides toward the goal. And there seems to be every reason to hope that in the future, under the guidance of the Federal Farm Board, the Department of Agriculture, and State agencies, the fruits and vegetables industry will be so organized that it can place its products on the market through efficiently operated sales agencies, owned and controlled by growers.

ANNOUNCEMENT: Your Farm Reporter at Washington has just presented his report on the cooperative marketing of fruits and vegetables in the South. Tomorrow he'll be back at this same hour to talk with dairy farmers. And next Thursday he brings you another report from the Federal Farm Board.

YOUR FARM REPORTER AT WASHINGTON

Thursday, February 27, 1930

COOPERATION INTERVIEW NO. 24: COOPERATIVE MARKETING OF WOOL IN 1930.

Speaking Time: 8 Minutes

Regions 1, 2, 4, & 5

ANNOUNCEMENT: Your farm reporter at Washington will now tell us about the wool marketing situation. Big changes in our system of selling wool are going forward. Mr. C. G. Randell of the Federal Farm Board's cooperative marketing division, has outlined to your farm reporter what those changes are. The farm reporter will now pass the good word on to you. -----

Wool growers in this country have been selling wool in a haphazard, loose, unorganized, way. What organizations wool growers have had, have been wildly competing with each other.

Mr. C. G. Randell, of the Farm Board's co-op division, says it is not an unusual sight to see the whole gang of wool salesmen cooling their heels in a buyer's ante-room waiting to get in to show their samples and offer their wool for sale. Naturally, when one gets in, he can't forget those fellows outside trying to get the business. He is tempted to shave prices, and maybe does.

Now, wool growers are setting up the machinery to cut out such ruinous price-cutting competition. Local co-ops, through State and regional co-ops will have one central selling organization known as the National Wool Marketing Corporation, owned and operated by the wool-growers themselves.

And, in speaking of wool-growers, Mr. Randell includes the range man, the original bag producer with a big clip and the small wool-grower in the fleece wool states. The wool, and mohair growers too, from all the growing sections will be selling together on a non-competitive basis. This is the biggest development in wool marketing to date.

You recall what has been going on. At first, we had country pools. Wool growers just entered into loose agreements to sell through the pool. The pool merely provided an assembling point to which dealers would arrange to come and bid on the wool. Sometimes, there was only one bidder. Anyway, there was little competition. The pools were little more than a favor and convenience to the buyer.

Then some State and regional organizations of wool growers were formed. But they have done a relatively small volume of business. As Mr. Randell points out, they were not members of any central sales organization and have been inclined to compete with each other in the wool market to sell their wool.

And another big trouble has been that those co-ops have never been able to finance the wool growers --- not in a really adequate way, that is. True, the wool producer through his co-op could get loans up to 65 per cent of the value of his wool. But he would have to wait for the balance several months until the wool was actually sold. And most of us know waiting for your money can get old fast.

But Congress came to the rescue in this Agricultural Marketing Act creating the Federal Farm Board under which the new National Wool Marketing Corporation has been formed, and under which that wool-growers' corporation has recently been granted a loan of \$1,000,000 by the Federal Farm Board.

Now wool growers, through this new co-op set-up, can get the 65 per cent advance through the Intermediate Credit Banks as before, and another 25 per cent through the Federal Farm Board. That is, instead of a 65 per cent advance the wool growers' organizations will be able to advance up to 90 per cent of the value of the wool. That will be enough to take care of the growers' needs much better than has been possible heretofore.

In the past, co-ops have consigned their wools direct to houses in Boston and have been financed in part by the Intermediate Credit Banks and in part by commercial banks. Under the new set-up, the National Wool Marketing Corporation will use the Intermediate Credit Banks, and the Federal Farm Board, and possibly commercial banks.

In order that as many wool raisers as possible shall get the advantages of these loans, the corporation has already hired several trained wool specialists whose job it will be to help sign new associations as members, and also help the new and old co-op members enlarge their membership among the growers.

In localities where the wool producers are not served by co-ops, co-ops will be set up. The new organizations, along with the old ones, will be affiliated so that all the wool and mohair gathered by the co-ops will be marketed through the National Wool Marketing Corporation.

L. B. Palmer, of Columbus, Ohio, is president of the National and Roger Gillis, of Del Rio, Texas, is vice-president. T. B. Wilson, McKinley, Wyoming, is secretary-treasurer. The Corporation has temporary offices in Washington, D. C., and any requests for information about this new wool marketing system should be addressed to J. B. Wilson, Room 602, Transportation Building, Washington, D.C.

Wool and mohair co-ops which meet the requirements of the Capper-Volstead Marketing Act are entitled to membership. Among the requirements is one that the co-op must be grower-owned-and-controlled. To be eligible for membership, the association must have handled at least 500,000 pounds of wool this last year or have that amount under contract to be sold this season. Each association has to buy one share of stock in the national wool marketing corporation for each 100,000 pounds of wool it handles. A National Wool Credit Association has been formed with a capital stock of \$1,000,000, to finance growers through Intermediate Credit Banks.

Arrangements have been made to finance the growers of member associations immediately. That is to be done through pre-shearing advances. The advances will be made to ranchers and farmers on a basis of one dollar a head for a twelve months' clip. Money will also be loaned on unsold wool and mohair in warehouses.

During 1928, 62 wool co-ops handled a little over five per cent of the total clip of the country that year. Officials of the National Wool Marketing Corporation, Mr. Randell tells me, expect that their organization will market 25 to 30 per cent of the total clip this year.

Besides its sales department to direct the selling of all the wool and mohair supplied to it by its member associations, The National Wool Marketing Corporation will have a research and standardization department which will analyze and interpret business statistics for its member agencies. In addition they will also have an educational and publicity department to disseminate information about the workings of the wool marketing agencies, including the national corporation itself. In other words, wool growers will have no wool over their eyes in viewing market facts.

Heretofore, very few of our co-ops did their own handling and grading. Under the new centralized system, however, these services will also be performed. The complete marketing process will be in the hands of the grower-owned-and-controlled organization.

The National association will be financed by charging a selling commission on the wool sold and by making a deduction not to exceed 1/8 of a cent per pound for reserves. Member associations will in turn be financed by the national paying part of the selling commission to them. The wool grower will make his selling contract with his local association. The local association in turn will contract with the national.

ANNOUNCEMENT: The big changes now taking place in our ways of selling wool have just been described to you by Mr. C. G. Randell, of the cooperative marketing division of the Federal Farm Board, as reported by your farm reporter in Washington. This Station _____ presents these co-op talks each week in cooperation with the Federal Farm Bureau and the United States Department of Agriculture.

1.9
In 340
YOUR FARM REPORTER AT WASHINGTON

Friday, February 23, 1930

NOT FOR PUBLICATION

Speaking Time: 10 Minutes.

Dairy Interview No. 24: A NATIONAL PROGRAM OF MILK IMPROVEMENT

ANNOUNCEMENT: My how time flies. Your Farm Reporter at Washington reminds me that with today's report he winds up his 24th week over Station _____. Each week day except Saturday at this time he has brought you information direct from specialists of the United States Department of Agriculture in Washington. Today he talks to dairymen. But his subject is one in which everybody will be interested. He's going to tell you now about a national program of quality milk improvement. Ladies and Gentlemen, Your Farm Reporter.

Let's do a little supposing. Suppose the United States Department of Agriculture and the State Agricultural Colleges spend 50 years studying how to increase production per cow. Suppose they find ways of cutting down costs of production still further.

Then suppose a future dairyman spends the next 50 years putting all these findings into practical use. Just suppose, we'll say, he develops a herd of cows averaging 700 pounds of butterfat a year--- at the very lowest possible cost.

You'd say he ought to make plenty of money, and we'd all envy him. But we can't be sure that he'd be making lots of money just on the basis of those production figures alone. Let's suppose now that he did all those things, but that in his enthusiasm for increasing production and decreasing costs he neglected to be careful about what happened to his milk after it left the cows. He let handling and marketing of his milk and cream sort of take care of itself, along the same old lines.

Well, what would happen to this dairyman? I'd guess that he would be away behind the procession, for one thing. He'd be getting more milk than many of his neighbors, maybe, and he might be producing it more cheaply, but still he might not be making so much money. If I read my horoscope correctly, one of the surest things about the future is that low-quality dairy products aren't going to be very profitable, no matter what your production and costs of production.

We've heard it before, but I think it will bear repeating many times again that future profits in the dairy business are going to depend largely on how our domestic production is balanced with our domestic consumption. Last week Mr. Roy C. Potts, Department dairy economist, emphasized that particularly. And this week Mr. Ernest Kelly, who is the Department's chief

market milk specialist, emphasizes it again. They don't take away any emphasis from efficient production---everybody knows how important that is--- but they do believe that the other side of the picture needs more emphasis. And both Mr. Kelly and Mr. Potts look to improvement of quality as one of the most important means of keeping consumption in step with increasing production. It's the old story---people will buy more milk and more butter when the quality is high. And you can apply the same thing to peanuts or automobiles. A large supply of low-quality material invariably slows up the market.

As Mr. Kelly pointed out, successful dairying means more and more the close tying up of all factors concerned. Economical production, sanitation, and orderly marketing must go together to make a complete economic program.

The Department of Agriculture believes that improving the quality of milk is so important to the future of dairying, that it is sponsoring what you might call a national program of milk improvement. In the past the Department has been actively helping, whenever called on by cities and towns that wanted a clean high-quality milk supply. And now it is offering to help states----states which want to make an organized effort to produce better milk.

As Mr. Kelly explained it the State Colleges will take the responsibility for organizing this effort, with the support and cooperation, of course, of dairymen and all others interested in dairying. The State College extension service will survey the situation in its state and then pick out a particular area to start in---a sort of demonstration area of, say 1, 2, or 3 counties. All groups interested in dairying will then be represented at an organization meeting. The Department of Agriculture will send a market milk specialist to this meeting to give lectures and demonstrations, answer questions and make suggestions. Among other things this specialist will demonstrate the use of the methylene blue test and the sediment test, which indicate the quality of milk and cream. He'll also visit dairy farms to demonstrate various improved methods.

Mr. Kelly explained that the main function of the Department of Agriculture will be to present the latest information on best methods to be followed in particular areas. Then the extension services, key dairy farmers, State Departments of Agriculture and other agencies, represented at the meetings, will go ahead to see that this information is available to all farmers who produce milk.

Afterward, the Department will study the results obtained in the various states. They'll look for the extent of the improvement and for different and better methods developed by both state specialists and farmers. In this way we'll find out the differences in quality resulting from different practices. It will give us a sort of check-up that couldn't be obtained in any other way.

After the work is once started, you see, the State College will be responsible for carrying it on. Several have already started. Some of the states expect to form permanent organizations, composed of farmers and

representatives of other interested groups and agencies.

As an example of what they hope to accomplish, Mr. Kelly points to the citrus fruit growers and apple packers. These fruit growers don't put culls in their packages for market. They grade carefully. He believes dairymen should do the same thing. He believes in organizing thoroughly on a quality-control basis, because experience shows that it's profitable.

The dairy industry, he says, has already passed through at least two important stages, so far as sanitation is concerned. The first stage was in the old days, 20 or 25 years ago, when dairy inspection was a new thing. There was much distrust on the part of both inspector and producer. The inspector often tried to trap the producer, serving as a detective rather than as an investigator and educator.

Then, the second stage might be called the period of change, and it resulted in many improvements. Use of preservatives in milk and cream was practically done away with, and adulteration by skimming and watering began to decrease rapidly. Milk inspectors were better trained and had better understanding of dairy problems. But improvement was still slow, because everybody was experimenting and trying to find new and efficient methods of producing high quality products.

Now, Mr. Kelly says, we've come to the third period.

"We haven't yet reached the millenium," he continues, "but we do see a wonderful change. If you want evidence you can find it in the attitude of the industry itself. Far-sighted dairy farmers and milk dealers are strongly behind the movement for inspection and grading of dairy products. Farmers and dealers themselves are taking the leadership, recognizing the beneficial results to dairy business.

"What are these beneficial results? Well the main ones are these: Better public health, both in city and country districts; fewer losses from sour and low-grade products; and an increase in markets and better prices."

In conclusion I might add that this national program is the outgrowth of more than 30 years of investigation and educational work by the Department of Agriculture. And incidentally the Department has publications on practically every step necessary to the production of clean milk. If you'll get your pencil ready I'll read over the ones you'll likely be most interested in. Here they are: "Production of Clean Milk," Farmers' Bulletin No. 602-F; "Washing and Sterilizing Milk Utensils," Farmers' Bulletin No. 1473-F; "Cooling Milk and Cream on the Farm," Farmers' Bulletin No. 976-F; "Improved Sanitation in Milk Production," Leaflet No. 3-L; and "Preventing Feed Flavors and Odors in Milk," Leaflet No. 25-L.

--ooOoo--

the

ANNOUNCEMENT: That was YOUR FARM REPORTER, telling dairymen about National Program for Quality Milk Improvement. Let's read over that list of bulletins again to see that all the numbers are right. Ready? Titles first, then numbers. Here they are: "Production of Clean Milk," Farmers' Bulletin No. 602-F; "Improved Sanitation in Milk Production," Leaflet No. 3-L; "Washing and Sterilizing Milk Utensils," Farmers' Bulletin No. 1473-F; "Cooling Milk and Cream on the Farm," Farmers' Bulletin No. 976-F; and "Preventing Feed Flavors and Odors in Milk," Leaflet No. 25-L. Address Your Farm Reporter in care of Station _____ or in care of the U. S. Department of Agriculture at Washington.

